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Ext. Copy. Stirniman

Instruction Book
and
# Parts List
for
MODEL B-25 H. P. TRACKLAYER

NUMBER 1

All Prices Subject to Change
Without Notice

C. L. Best Gas Traction Co.
San Leandro - California
Phone San Leandro 141

Instruction Book

and

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Form No. 144 10-23-19 500

C. L. BEST GAS TRACTION CO.

SAN LEANDRO, CALIFORNIA PHONE SAN LEANDRO 141

DEALERS AND BRANCHES

	PHONE
COUSINS TRACTOR CO., *112–122 East 7th Street, Hanford, Calif.*	
L. F. GRIMSLEY, *P. O. Box 453, Stockton, Calif.*	Stockton 21
FARM ENGINEERING CO., *726 L Street, Sacramento, Calif.*	Main 4100
E. I. CROOK, *417 W. Pico St., Los Angeles, Calif.*	
COLUSA IMPLEMENT CO., *Colusa, Calif.*	
FINNELL & McEWEN, *448 W. Santa Clara St., San Jose, Calif.*	
FRANK CORNELL, *27 West San Luis St., Salinas, Calif.*	Salinas 379-R
HOLSER & BAILEY, *Santa Maria, Calif.*	Phone 51
H. W. MOORE & CO., *18th and Wazee Sts., Denver, Colo.*	
GIBBS HDWE. CO., *230–232 Yosemite Ave., Madera, Calif.*	Phone 115
C. H. WEED, *Kearns Bldg., Salt Lake City, Utah*	
WESTERN FARQUHAR MACH. CO., *East 1st and Salmon Sts., Portland Ore.*	East 1856
ROCHESTER MOTORS CO., *Spokane, Wash.*	
DEVAN & GRIMSLEY, *Reno, Nev.*	
A. E. PAGE, *Walla Walla, Wash.*	
THEO. H. DAVIES CO., Honolulu, T. H.	
HAVANA FRUIT CO., *Teniente Rey 7, Habana, Cuba*	A-8451
F. ECHEGUREN CO., Mazatlan, Mexico	
JERARD & TEMPLE, *Pendleton, Ore.*	
A. W. SLOAN, *Syndicate Bldg., Oakland, Calif.*	Lakeside 5380

Important

Always furnish us with number of your tractor and motor when ordering parts.

Order all parts from the nearest Branch or Dealer. See page 1 for directory of Branches and Dealers.

To obtain parts promptly, give the name, number and letter of parts wanted.

Be particular to state Post Office address, Town, County and State where you wish parts shipped. Also state whether by freight, express or parcel post.

Address all correspondence to the Company and not to individuals.

Confirm all telephone orders in writing.

Prepay all charges on parts shipped in for repairs or replacements. Give owner's name and address on the shipping tag.

Parts shipped in for repairs must be accompanied by letter giving as much information as possible regarding the defective part.

Parts shipped in for repairs or alterations should also be accompanied by letter giving instructions regarding the work to be done. Otherwise, we are unable to identify the owner and can do no work upon the parts until we have proper instructions.

No credit will be allowed on parts unless they are returned by prepaid freight or express to the Factory for inspection.

Dealers or Agents are not allowed to give credit for parts until they have been inspected by the Factory.

Claims for shortage or error in order must be made upon receipt of goods or same will not be considered.

The prices in this list are NET and no discount will be allowed.

All shipments leave our Factory in perfect condition; should they reach you otherwise, you should make claim on the Carrier.

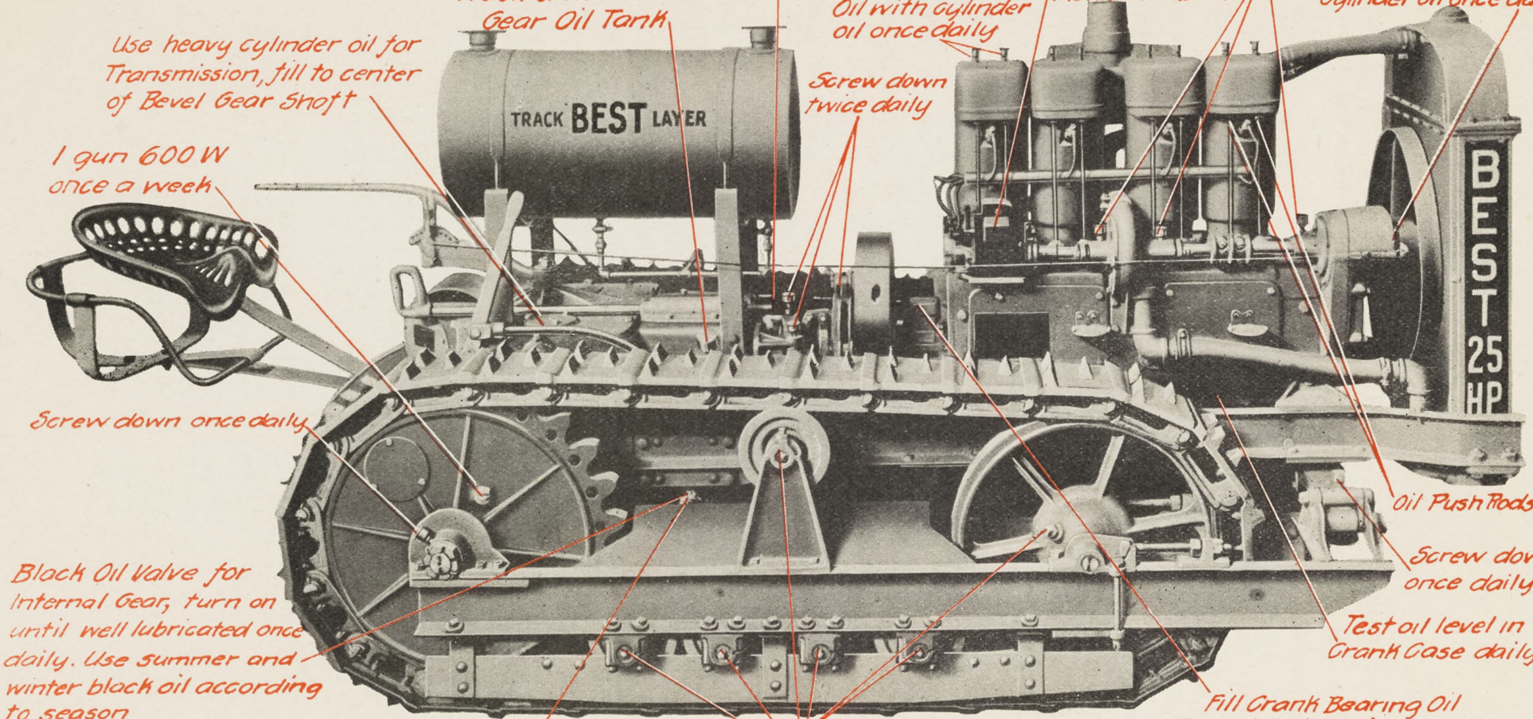
Broken goods should be refused or a full description of damage made by the Carrier Agent or expense bill. If this is insisted upon, full damage can always be collected from the transportation company.

We assume no responsibility for delay or damage to merchandise while in transit. Our responsibility ceases upon delivery of same to the transportation companies, from whom we receive a receipt showing that shipment is in good condition when delivered to them; therefore, your claim, if any, should be made with the transportation company and not the C. L. BEST GAS TRACTION COMPANY.

We reserve the right to make changes in prices of any of the parts herein listed without advance notice.

We also reserve the right to change the construction or material of any part where it seems desirable to do so without incurring the obligation of installing such change on tractors already delivered.

Customers will avoid errors and secure more prompt service by using our order blanks, a pad of which is furnished with each engine. Duplicates can be obtained for the asking.


Use heavy cylinder oil for Transmission, fill to center of Bevel Gear Shaft
Track and Internal Gear Oil Tank
Test oil level in Transmission Case twice a week
Oil with cylinder oil once daily
Screw down twice daily
See Magneto Instruction Book
Screw down 4 times daily
Governor Shaft, oil with Cylinder oil once daily
TRACK BEST LAYER
BEST 25 HP
1 gun 600 W once a week
Screw down once daily
Oil Push Rods daily
Screw down once daily
Test oil level in Crank Case daily
Black Oil Valve for Internal Gear, turn on until well lubricated once daily. Use summer and winter black oil according to season
Black Oil Valve for Tracks soak once daily
Use semi fluid grease once a week
Fill Crank Bearing Oil Pocket twice daily with cylinder oil

Short General Instructions

DON'T CROWD A NEW ENGINE—GIVE IT PLENTY OF GREASE

Do not crowd or pull a new engine too heavily. Be sure to give it plenty of oil, as this is important until such time as bearings become worn in.

NEVER OVERLOAD

Do not overload your tracklayer. This applies particularly to a new machine. Taxed to its utmost strength, any engine is certain to wear and give trouble in a comparatively short time.

Your engine is overworked when it stalls from time to time; that is, when it exerts great effort and slows down. In that case, there is just one thing to do—lessen the load—it pays, and pays big in the long run.

When starting tractor, do not engage clutch with a jerk, as this strains the engine, but pull it in gradually. The motor should not be run over the rated revolutions per minute, which is stamped on name plate.

SMOKING EXHAUST

The motor should not emit black smoke from the exhaust when the motor is running under load. When the carburetor is adjusted to this position it will sometimes smoke upon starting, but should it continuously emit black smoke it is a sign of too rich a mixture. Always adjust the carburetor when motor is warm. See Carburetor Instructions Card.

CARE OF TRANSMISSION

Examine case through inspection plates once a week to see that there is plenty of oil. Oil should be up to the center of lower transmission shaft or to pet cock in front end of transmission case. Transmission should be drained and washed out with kerosene every six months, and new oil put in. When operating stationary drive the case should be filled until upper transmission shaft dips in the oil.

The Tracks

TO TAKE UP TRACKS

When taking up tracks be very careful and pull the front idler up evenly with the large adjusting bolts. Also be sure and keep clamp bolts very tight on idler boxes. Take a rule and measure from sides of swing frame to center of idler near the rim in front and rear. This measurement should be the same.

TO USE COMPRESSION AS BRAKE GOING DOWN GRADES

Going down steep grades on compression, leave clutch in, close throttle. Do not turn switch off as the fuel will wash the oil from your cylinder walls.

DON'T TURN TOO SHORT

The twenty-five horsepower tracklayer turns within a foot or two of its own length; however, this is not practicable on loose ground as the side movement of the inside is certain to pick up dirt and rocks which are liable to break the track or track tightener bolts. Do not forget this because if the track tightener bolts are broken, it will be from this cause and no other. Always handle the engine carefully as good treatment will pay you big returns. It means less wear and tear and consequent saving.

HOW TO TAKE TRACKS APART, TRACKROLLERS, ETC.

Do not run trackrollers that have part of the flanges broken. Keep a close watch for any cracked or broken track spools. Be sure to keep all bolts in the tracks tight.

Take the tracks apart just above the ground in front of the idler. This saves hard work.

DO NOT RUN AN OVERHEATED MOTOR

If the water boils or motor knocks or loses power, it is an indication of overheating. The cause of a motor heating may be due to lack of water in the radiator, lack of oil, carbon in cylinder, radiator choked with straw or leaves, slipping of fan, or water not properly circulating.

OILING INSTRUCTIONS

See Oiling Chart, Page 7.

Use heavy cylinder oil of good grade in engine, oil holes and oil pockets.

Use heavy cylinder oil in transmission.

Use summer black and winter black oils on internal gear and tracks according to seasons.

Oil level in crank case should be at least ½ inch over the screen which covers the intake of oil pump. **Clean oil strainer in bottom of crank case every week.**

Keep enough oil in transmission case to reach center of bevel gear shaft.

Oil internal gears in drive sprocket; turn on once a day.

Oil tracks once a day by turning valves on from oil tank.

Oil rocker arms two times a day.

Fill up oil well in track rollers once a week for Hyatt Roller Bearing.

Fill up oil well in track rollers every day for plain bearing truck rollers.

Fill up oil wells in idlers every week.

Fill up oil wells in track sprockets once a week. For magneto oiling instructions see magneto instruction book.

Turn up timer shaft cups two times a day.

Turn up clutch yoke cups two times a day.

Turn up clutch yoke arm cup once a day.

Grease clutch plate when engine is idle twice a day.

Change oil in crank case every week. Wash out with coal oil before refilling. Fill crank case to top overflow cock or one inch above unless engine is working on very steep grades, when it should not be filled above overflow cock, otherwise it will splash out and go to waste. **Never let oil level drop below overflow cock. Clean oil strainer in bottom of crank case at least once a week.**

Do not use grease in track and internal gear, but use oil as recommended above. Grease combines with sand and makes an excellent cutting compound, whereas oil washes away the grit and sand.

DON'TS

Don't throw the clutch in with a slam. Use judgment as it will wear longer and save much annoyance.

Don't try to turn short on soft or plowed ground; either empty or pulling a load.

Don't allow tracks to become too loose.

Don't jar or hammer near the magneto if you can avoid it.

Don't run the engine above the speed marked on number plate.

Don't allow the gap between the rocker arm and valve stem to become more than 1-16 inch.

Don't make a practice of running your throttle back and forth violently.

Don't expect your motor to shoot on all four cylinders if you don't keep your spark plugs in good order.

Don't take it for granted that ignition trouble is always the cause for your engine stopping. Remember it has to have fuel.

Don't tolerate any loose bolts. Keep your tractor in trim at all times.

Don't tolerate any loose wires or poorly made connections. Fix them at once.

Don't do everything that Tom, Dick and Harry suggests.

Don't forget oil strainer in bottom of crank case.

Don't forget that your motor is not an animal organism repairing itself; it requires an occasional careful inspection.

Don't give us credit for being able to guess what you want when you order extra parts. Write plainly and give us full information and instructions for shipping.

PLACING THE TRACTOR IN SERVICE

Regardless of the condition under which the tractor is received, the first duty of anyone charged with its care and operation is to give it a systematic and detailed inspection.

The initial inspection must cover all possible shortages of easily removable parts, including accessories and tools, such defects as loose parts and any damage that may have been caused in shipment or at the hands of previous operator, and any other conditions that would affect its proper operation.

REPAIRS

Such repairs as are necessary to the proper operation of the tractor must be given attention immediately. If permanent repairs can not be made at once, temporary repairs should be made and advantage taken of the first opportunity to make this permanent.

LUBRICATION

How long a tractor will give first class service depends more upon proper lubrication than any other feature of its care. This is particularly true of a new tractor and no precaution should be overlooked to make certain that every lubricated part has a full supply of lubricant. As a precautionary measure tractors are shipped fully lubricated. However, when placing the tractor in service this fact should be completely ignored and every lubricated part given careful attention. **See lubrication instructions on Page 10.**

FILLING THE COOLING SYSTEM

Fill the radiator with clean soft water. Water containing lime or other impurities should not be used. Rain water is ideal for the purpose.

FILLING FUEL TANKS

There are two tanks in one. The front small tank is for gasoline. When possible it is recommended that the gasoline be strained through chamois skin to remove any water that may be in it. The large tank is for distillate. It is advisable to operate the tractor on gasoline for the first two or three days until the operator becomes familiar with the functioning of all the various parts.

ESTABLISHING OIL FILM IN CYLINDERS

If an engine has not been in operation for three days, especially after undergoing shipment from a distance, it is necessary to remove the spark plugs, and with the aid of an oil can inject about one tablespoonful of good cylinder oil in each cylinder. Revolving the fly wheel by hand will distribute the oil between piston rings and cylinder walls and re-establish compression. Then clean spark plugs carefully, seeing that they are in good order, wet the ends with gasoline and replace. Care should be taken in cleaning terminals and connections to spark plugs.

PRELIMINARY STEPS

Before starting the engine it is essential to see that the master clutch is disengaged; that the gears are in neutral position, and that all tools and materials which might become entangled in moving parts have been removed from the tractor.

STARTING THE ENGINE

In can be assumed that the tractor is in condition to operate when the instructions outlined in the preceding paragraphs on "Placing the Tractor in Service" have been complied with and that all adjustments are correct or nearly so. See that the impulse starter on magneto is set for starting, that the gasoline to the carburetor is turned on; that the hand throttle lever is placed at one-half of the full quadrant, then prime your engine through the priming cups provided on the top of each cylinder with about one teaspoonful of gasoline in each priming cup. Close priming cups. Place cranking bar in holes of fly wheel, turn slowly until on compression, then give the fly wheel a quick pull past center.

NOTE: There should be no occasion for continued cranking of an engine. An engine that has been idle for a long period of time or a cold engine necessitates a certain number of revolutions before various related units such as oil system, carburetor, etc., will function properly, but after this no difficulty should be experienced.

IF THE ENGINE FAILS TO START

Failure of an engine to start can generally be traced to three reasons, namely: ignition, carburetor, or lubrication. A short systematic search will reveal which system is at fault, and as a rule the remedies are simple.

Two essentials are necessary before an engine will run or even start—fuel and ignition. If the fuel reaches the cylinders in the form of a vapor mixed with a certain proportion of air, although not the correct proportion to produce power, and a spark occurs, some result would be noticeable even though it be but a single weak explosion. If no explosion occurs even after priming, which insures an explosive mixture in the cylinders, it can be reasonably assumed that the ignition is at fault. This fault can generally be traced to the following causes:

1. Magneto breaker points out of adjustment.
2. High tension wires damp or wet, or dust or carbon on distributor segments.
3. Breaker or distributor over lubricated.
4. Open circuit, broken or disconnected wires.
5. Spark plug points too far apart. The spark plug gap should be about 1-64 inch or the thickness of a postal card. (See care of Magneto in Magneto Instruction Book.)

If one or more explosions occur and then the engine stops, it proves that the ignition system is functioning and that the fuel is either not reaching the cylinders or has not the proper proportion of air. (See adjustment of carburetor in Carburetor Instruction Book.)

WHAT TO DO WHEN THE ENGINE STARTS

Examine water circulation. See that water is flowing freely. Fill radiator to overflowing. See that the fan is running properly.

IF THE ENGINE MISSES

Such condition must not be neglected. The difficulty should be located and remedied immediately. When running properly change the fuel cocks so as to use distillate instead of gasoline.

DRIVING THE TRACTOR

After the operator takes his seat, shift his gears into the speed that is selected, pull the main clutch in gently with the clutch lever (at the righ hand) until the load is taken up by the tractor. Then pull it in firmly, and without jerking.

STEERING

Steering is accomplished from the operator's seat through the medium of a steering clutch hand lever operating the steering clutches located each side of the transmission unit. These steering clutches control the power transmitted to either track drive sprocket. If it is desired to turn in a certain direction, the steering clutch hand lever is pushed in the opposite direction to which it is desired to go, which releases the steering clutch on the side toward which it is desired to turn. The degree of turning can be governed by applying the foot-brake on the released steering clutch as desired. Do not apply brake until clutch is released.

If a short turn is desired, release steering clutch and apply steering clutch housing foot-brake firmly on the released clutch. With a load the effect of disengaging a steering clutch is more pronounced, and except for right angle turns the use of the brakes is not necessary. *Keep feet off brakes when not engaged in turning.*

CHANGING GEARS

It is not intended that the gears be changed while the tractor is in motion, due to the limited coasting abilities of the tractor, the weight of the master clutch and the size and type of gears used. Changing of gears while the tractor is in motion is not to be attempted. Stop the tractor by disengaging the master clutch. Engage the gear desired by using the gear shifter. If for any reason the gears do not mesh easily, it is not advisable to try and force them, but engage the master clutch slightly for a moment and try again.

DRIVING SUGGESTIONS

It is the duty of an operator to remain in his seat at all times when the tractor is in motion. The tendency to jump off momentarily for any reason whatsoever must not be tolerated. A constant watch must be kept of the entire tractor, and reduction in power or excess heat should be looked after. Any unusual noise in the operation of the tractor should be immediately investigated. A great amount of trouble can be avoided by taking care of small troubles when they first appear.

HOW TO STOP THE ENGINE WHEN HOT

When an engine is hot if stopped by shorting magneto or turning of switch, the momentum of the fly wheel will cause several charges of fuel to be sucked into the cylinder walls to mix the lubricant. The oil is already thin from the heat and when mixed with distillate runs off of cylinder walls giving poor compression and leaving your piston rings without lubricant. To avoid this, shut off your fuel and let your engine die with a hot spark—which in turn keeps your plugs clean. Then squirt cylinder oil in the priming cups and turn over the fly wheel a few times. This will make starting easy when ready to start engine again.

LUBRICANT AND CARE OF MOTOR

As grit and dirt are the sources of greatest wear on an engine, extreme care should be taken before an inspection plate is removed, for if not properly cleaned, small particles of the accumulated grit and dirt will enter the crank case and find their way into the bearings, causing unnecessary wear, and if the condition is not remedied, it will soon cause serious difficulty.

WASHING CRANK CASE

The crank case of the engine should be washed at regular intervals of at least once a week. Drain all oil from the oil reservoir. Remove side plates on one side of engine and with a squirt gun or can, wash sides of crank case, using kerosene (not distillate or gasoline because it destroys the oil film on bearing surface it gets in contact with), allowing kerosene to drain into oil reservoir. With a piece of soft clean canvas or other cloth that does not give off lint, wipe out kerosene from the bottom of oil reservoir. Do not wipe sides of crank case, thus minimizing chances of getting lint in oil.

OIL IN CRANK CASE

Fill crank case to top overflow cock or one inch above unless tractor is working on steep grades, when it should not be filled above overflow cock, otherwise it will splash out and go to waste. **Never let oil level drop below overflow cock.**

REMOVING CARBON

When carbon accumulates in combustion chamber, it can best be removed by taking off cylinder heads and scraping the deposit off.

Remove connecting rods and pistons, scrape under all rings, clean and scrape oil grooves on the piston and scrape the under side of the piston above the piston pin. The use of water injected with the fuel is not recommended on account of exhaust valve warping or pitting.

REMOVING PISTONS

To remove the pistons for the purpose of fitting new rings, or cleaning piston ring grooves, the pistons can be removed through the crank case doors on the side opposite the cam shaft:

First—Remove spark plugs so that compression will be released and not interfere with handling of the piston.

Second—Remove the dip pans under connecting rods.

Third—By means of the fly wheel revolve the crank shaft until the lower connecting rod bearing of the piston desired is accessible.

Fourth—Remove the lower half of the connecting rod bearing.

Fifth—Rotate the fly wheel (with the upper half of the connecting rod bearing still on the crank pin) until the bearing is past the opposite side of the crank case.

Sixth—With a light bar unset the upper half of the connecting rod bearing from the crank pin and with one hand on connecting rod lower it to the bottom of oil pit. At this point it may be necessary to rock the crank shaft one way or the other to obtain the necessary angle to allow the piston to clear the top of door.

CLEANING PISTONS AND REMOVING RINGS

After scraping off carbon from piston, wash with kerosene and wipe dry. To remove piston rings use a piston ring remover or three metal guides ¼" wide by 1-64" thick and about 6" long. In taking off or replacing piston rings these guides should be placed equally around the piston and underneath the piston ring. In removing rings take off the top ring first, then second and third.

In replacing, reverse the order and be careful not to mix the rings, but replace each in the same slot it was taken from.

NOTE: Piston rings should be handled carefully and when opened to put on or off of piston should not be sprung sideways. A piston ring can easily be sprung sideways and if this happens it should be discarded and a new one put on.

TO CLEAN PISTON RING SLOTS

Scrape the piston ring slot clean with a flat metal scraper. If it is not possible to remove all of the carbon, use No. 000 sand paper under a flat stick, bearing on it lightly while cleaning the slot. Never use a file or emery cloth for cleaning piston ring slots. Rinse the slots with kerosene and wipe dry with a cloth.

PISTON RINGS

The three piston rings are of grey iron, machined and ground and are located above the piston pin. The function of these piston rings is to seal the space between the cylinder walls and the piston, preventing the escape of gases under pressure. The rings also prevent excess lubricant from working into the combustion chamber of the cylinder.

FITTING PISTON RINGS

Fitting piston rings to a piston requires care and accuracy in the work. There are three factors to be considered:

First—The fit of piston ring in the cylinder to get proper ring break.

Second—The fit of the piston ring in the slot on the outside of the piston.

Third—The fit of the piston ring when placed on the piston.

Fit the piston ring in the cylinder first and with a fine file remove any wire edge or burrs from the top or bottom edge of ring.

There are two methods of placing the ring square in the cylinder in order to get the proper ring break:

First—If the cylinder head is removed, the piston can be left in the cylinder and the piston ring placed squarely against the head of the piston and the piston dropped away for an inch or so to afford an examination of the break.

Second—In case it is not desired to remove the cylinder head, the piston can be removed through the inspection plate of crank case, piston ring inserted squarely in the bottom of the cylinder by taking accurate measurement from the bottom of the cylinder. When the ring is fitted in the bottom of the cylinder, the use of a small hand mirror will facilitate examination of the break.

REPLACING PISTONS

Replacing the pistons after cleaning or repairing is accomplished in the reverse direction as given to take out, except that the light bar must be used under the piston with a light purchase on the cam shaft to slip it into the cylinder. The bottom edge of the cylinder is beveled to aid in compressing the piston rings and to make the insertion of the piston an easy matter. Never insert a piston through the top of a cylinder as the necessary bevel is not provided to compress the rings, and the piston rings may be damaged on one edge.

After the piston has been inserted and the lower half of the connecting rod bearing has been placed on the connecting rod, be sure that all cotter keys are placed in the connecting rod bolts.

ADJUSTMENT OF MAIN OR FLY WHEEL CLUTCH

To adjust the main clutch proceed as follows: Release the clutch lock bolts on the clutch spider, turn clutch spider to the right about one-fourth turn, turn tightener locking bolts, engage clutch with hand lever. If not tight enough, repeat.

To stop the clutch from spinning when released, we have provided a small brake which engages the clutch shifter.

ADJUSTMENT AND CARE

Do not think from the following instructions that it is necessary to make frequent adjustments and to frequently overhaul the tractor. It is not. Keep a watch for any unusual sounds and be sure that you have correctly determined the source of the noise before attempting to dismount any part of the tractor. Frequently an application of lubricating oil to the noisy part will save much unnecessary delay and expense. It is better to have a service man make any such adjustments that may be required until the operator is thoroughly familiar with the tractor.

Bearings

HOW TO DETERMINE A LOOSE BEARING

Remove crank case door. Be sure to wipe away all dust and dirt before doing so.

Insert a pinch bar or crow bar under the crank shaft near each bearing and pry the shaft up and down. If one hand is held on the bearing under test, the slightest movement can be felt in this manner. Be sure and do this when motor is warm and oil film in bearings is at its thinnest point. A knock in your motor may mean a loose bearing.

TO DETERMINE A LOOSE PISTON PIN

Turn the crank shaft until lower edge of piston is far enough down to secure a prying place for a pinch bar. With a purchase on the cam shaft pry the piston up and down, feeling the looseness as in the crank bearings. If any looseness is felt here, it is necessary to remove piston from cylinder and inspect pin and piston pin hole, replacing either part which may be worn. Be sure there is no looseness in crank pin bearing before testing piston pin.

THE CRANK PIN

The crank pin can be tested in the same manner as the crank shaft bearing. If there is only a small amount of play, this can be removed by taking out a shim from **each side. Never remove shim from one side of a bearing only.**

BEDDING CRANK SHAFT

The cradles and caps for the crank shaft can be sent to the factory for rebabbitting. When this is done, the babbitt will be cast at the proper temperature, eliminating all possibility of burning or cold shots. Be careful to see that all oil grooves and holes are free from dirt and scrapings before final assembly.

Relieve the sides of bearings where the two halves meet by scraping away the sharp edges. See that the shims do not touch the crank shaft.

If it is found necessary to put in new babbitt bearings, it is better to have it done by an experienced factory man. However, if the services of one are not obtainable, it can be done by proceeding as follows:

Place the two outside end cradles or lower half of crank bearings in the crank case. Smear Prussian blue or lamp black and oil on crank shaft where it fits these bearings, being careful to rub out all lumps and to spread evenly with the fingers. Place the crank in position and rotate. Remove crank and scrape the high spots from the bearing. These will be wherever the blue or black shows on the bearing metal. Continue until a full bearing is obtained, then insert center bearing and do the same with it until fitted.

Next fit caps to bearings. Insert 1/8" shims consisting of one 1-16" shim, three .012", and six .006" shims on each side. Bolt cap down tight and revolve crank shaft, scraping off high spots as in case of lower half bearings until a full bearing is obtained. Each cap must be fitted separately. Be sure and slack off all other caps when fitting one. When all caps have been thus treated they should be bolted down tight. The crank shaft should again be rotated to see that the combined pressure of the bearings is not too great to permit the engine being cranked. Any tightness should be relieved by inserting paper shims of .003" or .004" thickness.

THE CONNECTING ROD OR CRANK PIN BEARING

Turn crank pin in position nearest to door. Place upper half connecting rod on same and rotate it back and forth as far as possible. Scrape off high spots until a fit is secured as in crank bearings. Do the same with the lower half. Then insert piston and rod in cylinder, leavig rings off of piston. Place upper half of connecting rod on crank pin and rotate crank shaft. The bluing on rod bearing will indicate whether rod is square to crank or not. If not, it should be scraped until it is. Then insert shims and bolt cap to rod, rotating to determine fit, adding or removing shims as needed for proper amount of freedom in bearing. The connecting rod babbitt bearings are die cast shells and can be purchased at the factory or from dealers when the old ones are too badly worn to permit further adjustment. We advise shipping connecting rods to the factory so that the shells can be cast in them and they can be reamed to very nearly the correct size. This leaves a minimum of fitting and scraping and insures the rod being square with the crank shaft. Do not mix connecting rods and caps as they are fitted together at factory. Keep ALL dirt away from ALL bearings.

When new shells are inserted care should be taken to see that they properly fit the connecting rod. The edge of the shell should project .005" or .006" above the edge of the connecting rod.

ANTI FRICTION BEARINGS

The Hyatt roller bearings on the transmission shaft can not be adjusted as these are of the non-adjustable type of bearing. With plenty of clean oil and proper care in keeping out dirt, these bearings will be in good shape when the balance of the machine is worn out.

The Timken roller bearings which are found on the bevel gear sleeve and fan shaft should be adjusted as follows: (See cut on Page 27.)

Bevel gear Timken No. 552/559 should be adjusted by removing clip B421 and turning up nut No. B420 with spanner wrench. The bearing should be screwed up tight and then backed off until the proper amount of freedom is obtained. When this is done it may be necessary to readjust the opposite bearing in order to keep bevel gear No. B429 in proper mesh with bevel pinion. Care must be exercised not to get these bearings adjusted too tight as this will ruin the bearing.

The Timken bearings in fan should be adjusted (See cut on Page 39) by removing one or more shims, No. B269, from between timing gear housing and cover, B265. This will adjust both the front and rear bearings at the same time.

TO ADJUST BALL THRUST COLLAR AND STATIONARY DRIVE BEVEL GEAR ON UPPER TRANSMISSION SHAFT

Remove clip B443. (See cut on Page 25.) Back collar B524 in to adjust bevel gear B600, then loosen wire B538 and screw in collar B523 to make up amount bevel gear was adjusted. Replace wire and cap screw. Do not get bevel gear too deep into mesh.

TO ADJUST MAIN DRIVE BEVEL PINION AND THRUST COLLAR

(See cut on Page 27.) Remove clip B443 and screw up collar B524 until the bevel pinion B427 is in proper mesh with bevel gear B429, which should be when the tops of the teeth are flush. Should there be any looseness in thrust collar, remove screw in collar B524 and back off collar B528. File enough from the face of B524 to permit B528 collar to be screwed far enough in to take up all but .010″ play.

TO ADJUST STATIONARY DRIVE GEAR AND SHAFT

Loosen clip B443 and screw in collar B524. This can be done through inspection plate B603, until tops of teeth on two gears are flush; then tighten clip B443. Should there still be more than .010″ or 1-64″ end play in stationary shaft, remove wire in casting B524, and back out collar B523. File off the necessary amount from the face of B524 to reduce the end play to the desired amount.

Should it, through any mishap, be necessary to dismount the transmission, proceed as follows:

To remove the upper transmission shaft, dismount the motor. (See cut on Page 25.) Remove nut from stud B260, in front end of upper transmission shaft. Remove entire main clutch assembly back to transmission case. Remove screw holding cover B528, and screw off cover B528. Unscrew nut on lower transmission shaft and washer B618. This will permit the ball thrust and Hyatt roller bearing outer race to be removed with the transmission case cover. Remove front transmission case cover B401. Set screw 3974, of inner race of Hyatt bearing, into transmission shaft so that it does not project above the shaft. This inner race can then be removed and all gears and washers B487 slid forward to end of shaft and removed. Next remove stationary drive housing by taking nuts off of stud B605. Remove screw B475 from rear end of case near stationary drive gear and the whole upper transmission shaft can be pulled out from the rear excepting the center roller bearing which can be removed by taking out screw B475 in outer race and sliding to one side.

TO ASSEMBLE

To assemble, reverse operations. Fill all bearings with oil when assembling. Be sure to wash out transmission case and all parts before assembling. Do not allow parts to become full of grit or dirt. Cleanliness is the key to successful and continuous tractor service. Don't forget to put in new oil before starting tractor. Plugs are provided in bottom of case for flushing.

TO REMOVE LOWER TRANSMISSION SHAFT

Proceed as in case of upper shaft to remove front cover B401. Then slide off high and low gear B432, and pull shaft out toward front.

TO REMOVE STATIONARY DRIVE SHAFT

(See cut on Page 81.) Housing should be removed from transmission case to facilitate handling. It is not necessary, but easier if stationary drive pully is removed. Remove cover B602 and unscrew nut on stationary shaft, removing gear B600. Remove set screw holding cage B441. When this cage is removed, it will bring Hyatt roller bearing and thrust washer, also all nuts and collars as far as B527, with it. Shaft can now be withdrawn. If it is desired to remove Hyatt bearing No. 27174, take out cap screws in cover B617B and remove same. Hyatt bearing can then be removed. Reverse operations for assembly.

CAUTION: When reassembling parts, especially felt washers, see that the part of it which comes in contact with a revolving part is well greased, otherwise this will soon be worn away and lose its value as an oil retainer and dirt excluder. It is best to put in new felt washers if the old ones are torn or worn.

TO REMOVE TRUCK ROLLERS

(See cut on Page 61.) Slack off track as far as it will go, then place a jack under truck frame and cause all slack to be under truck rollers. Remove bolts holding B935 clamp box. This will drop the roller down so it can be removed. The boxes can now be removed from the roller and the shaft withdrawn. When reassembling this roller, it is well to thoroughly lubricate the surface of the thrust washers B930 and B931 where they rub on each other.

TO ADJUST STEERING CLUTCHES

(See cut on Page 27.) The multiple disc steering clutches have spring tension and friction surface sufficient to transmit the power until the Raybestos plates wear, allowing the clutch to slip.

If the clutch starts slipping, remove the fuel tank and carefully clean the transmission case cover B412B. Take out the cap screws and remove ¾″ hex nut from B701. Take off the cover and note set screw ½″ by 1½″ in the clutch adjustment plate B999. There are three set screw holes in clutch adjustment plate B999 and one slot in internal clutch drum B998, so the plate can be taken up one-third of a turn at a time. Take out the set screw and release the spring pressure of the clutches by loosening the ⅜″ cap screws in casting B331 and screwing B332 out far enough to let the spring pressure off the clutch. If the clutches are slipping badly, turn the adjusting plate one and one-third of a turn.

TO TAKE OUT STEERING CLUTCH

Jack up the engine on the side that needs be taken out both in front and back, uncouple the track on front of the track idler, letting it off over the track sprocket, and unbolt swing frames from swing frame bearing B821, and take out spring shackle bolts. Push the swing frame ahead enough to clear the track sprocket, then pull it out sideways. Take large nut B830 off the end of track sprocket axle B829. Pull off the track sprocket. Take off nut B472 and washer B473, and take off driving pinion B438. This will allow dust guard B825B to come off. Holding screws 3974 should be screwed in the track sprocket axle letting the inner races from Hyatt bearing 16373 come off. Take the cap screws from the side housing of the transmission case and take off foot brake lever. This will let the housing B410 come off.

The entire clutch assembly can now be pulled out of the transmission case. If clutch shifting collar B462 is badly worn, it should be replaced with a new one or with a saw steel washer put in to take up the wear. If the clutch is taken apart, each plate should be examined for rivets that hold the lining, which might come out, or being too long and not letting the plates get their full friction surface. It should also be noticed if there are any broken clutch springs.

After the clutch has been repaired and reassembled, the clutch fork B464 should not hit hard against the side of the transmission case, but should have at least 1-16" clearance without any pressure being put on the clutch springs. The push pins B332 should be adjusted so there is 1-16" clearance between it and the clutch fork B464 when both clutches are engaged.

GOVERNOR

With the throttle quadrant wide open the engine should not run over the speed stamped on the engine number plate, which is 800 R. P. M. If this takes place, the spring wire should be lengthened until the proper speed is obtained. The butterfly stop handles the engine at idling speed, if it stops when the throttle quadrant is ahead, the screw on the butterfly stop should be screwed in until it keeps the engine running at a low rate of speed.

If taking the tension off the throttle quadrant spring does not keep the engine from running too fast, the lever on the carburetor butterfly has slipped and should be reset to its original position.

VALVE TIMING

The timing of the cam shaft should not be interfered with unless through some mishap to the cam shaft or timing gears, its original position should be lost. If so, note as follows:

Turn the engine until the cylinder next to the fly wheel, which is No. 1, is on the exact top center. This center can be found with a tram nine inches long measuring from the center punch mark on the left hand corner of the crank case to the center punch mark, marked with a V, on the fly wheel. The center can also be found by taking the highest point of travel through the spark plug hole with a wire. Set the cams so that the exhaust valve closes, then the intake will open with an interval of about three degrees between them. This interval can be obtained through the adjustment of the tappets.

TO SET MAGNETO

Put No. 1 cylinder next to fly wheel exact center up with both valves closed on compression stroke. This center can be found with a nine-inch tram measuring from a center punch mark on the left hand corner of the crank case to the center punch marks on the fly wheel marked with a V or by inserting a wire through the spark plug hole and taking the highest point of piston travel. Set magneto on the bracket at full retard. Turn Oldham coupling on the timer shaft until the carbon brush in the distributor is on segment No. 1. Put a thin piece of paper between the contact points in the breaker box and rotate the magneto until the points just release the paper from between them, then tighten the set screw that fastens the coupling to the magneto shaft, and bore the holes for the taper pins to hold it permanently. The impulse starter NEVER should be snapped in operating position while setting the magneto.

TO GRIND VALVES

In removing the cylinder heads to grind the valves, care should be taken not to damage the cylinder head and manifold gaskets. After heads are removed, scrape the carbon off the heads and valves and clean the whole head. Examine the valve stem guide and if it is badly worn it should be replaced before starting to grind the valve. Also examine the valve and seat. If the valve is warped, it should be turned true on a lathe or a new one put in. If the valve seat has a low place burned in it, a valve seating reamer can be obtained from the nearest dealer or the factory to true the valve seats.

Clamp the cylinder head in a vise. The valve grinding tool fastens to the valve stem with a set screw and is used with a carpenter's brace to rotate the valve. Do not turn over a turn one way at a time and change the valve location often. Grind until the seat and valve are free from burned spots, then clean them thoroughly, then put eight pencil marks around the valve. If these rub out even, the valve is not warped and is touching even. Then polish with finer grinding compound.

Do not use emery in grinding valves. Powdered carborundum or Clover Leaf grinding compound are suitable for this work.

ADDITIONAL DON'TS TO THE TWENTY-FIVE

DON'T suppose, be certain.

DON'T forget oiling instructions. Grease is cheaper than repairs and the time required to replace.

DON'T run your tractor over ditches and rough places full speed. A little slowing down may save repairs.

DON'T allow any of the engine bearings to pound. It is dangerous to run an engine with a pound in the bearings.

DON'T pour gasoline in supply tank with fire burning near the tractor.

DON'T try to solder a leaky gasoline tank until first filling it full of water, and allowing to stand for some time before attempting to repair.

DON'T forget to drain the water from your engine, radiator and pump in freezing weather.

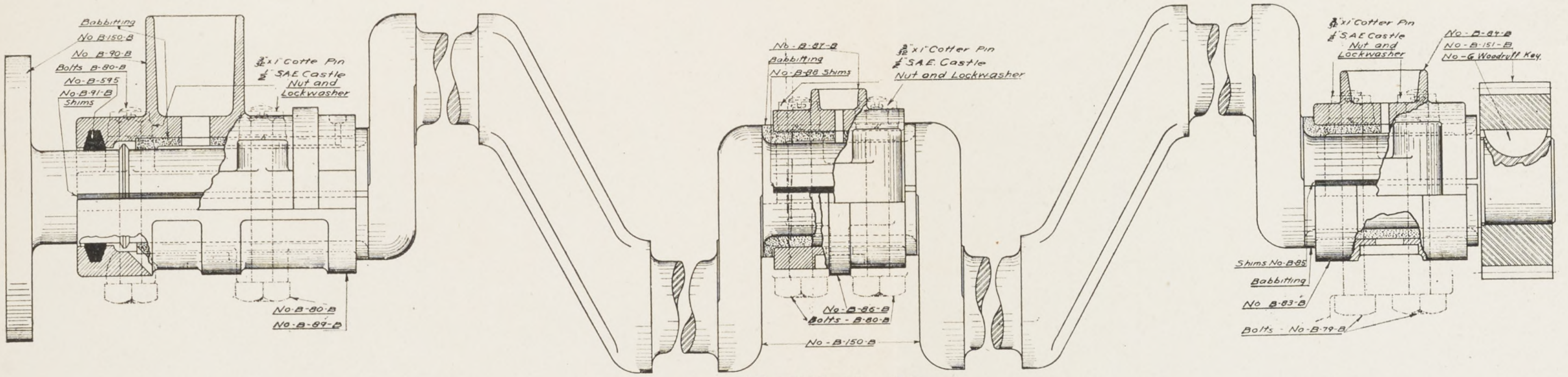
DON'T use a file too freely on contact points in breaker box if you expect them to last; just file enough to clean them off and smooth them up.

DON'T run your tractor one more round when the oil is low in the crank case.

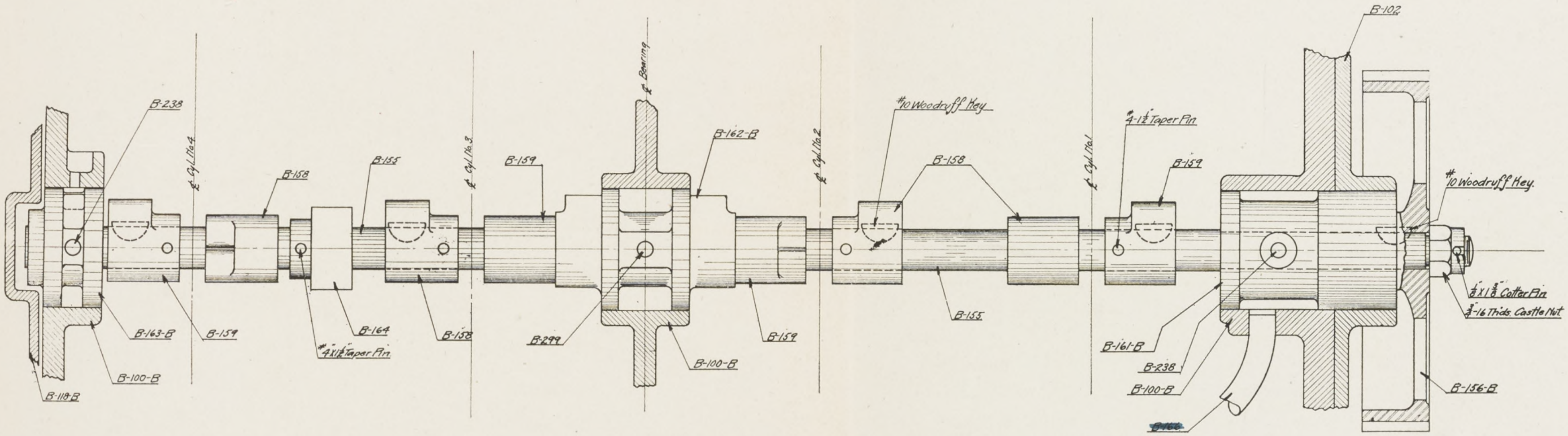
DON'T walk in front of your tractor when it is in motion.

DON'T forget to use a little kerosene on your valve stems occasionally. This will cut out the gum and carbon, and will make your valves work freely.

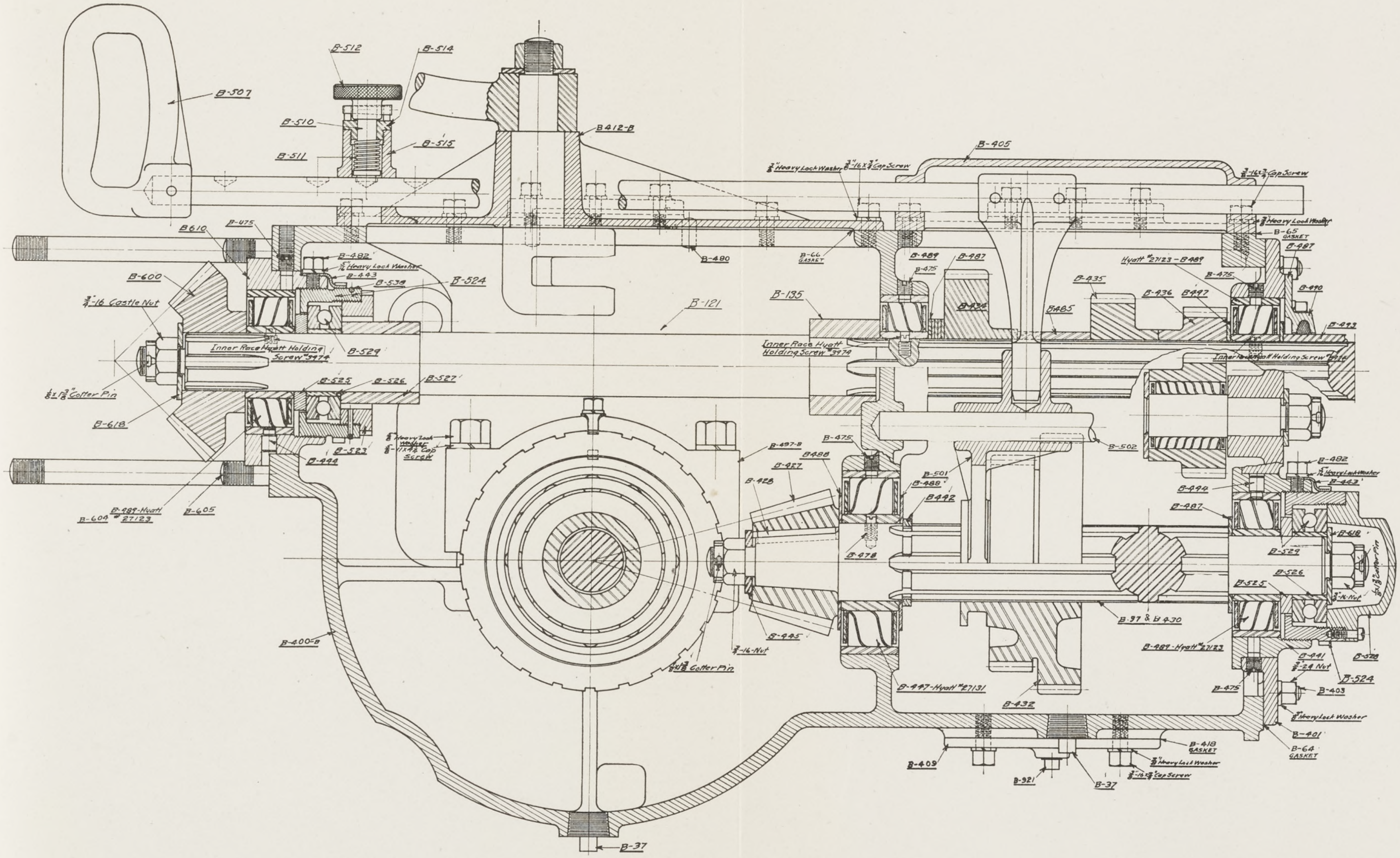
DON'T overlook any unusual sound or noise which develops in your tractor, for it is a mechanical call for help and must be heeded.



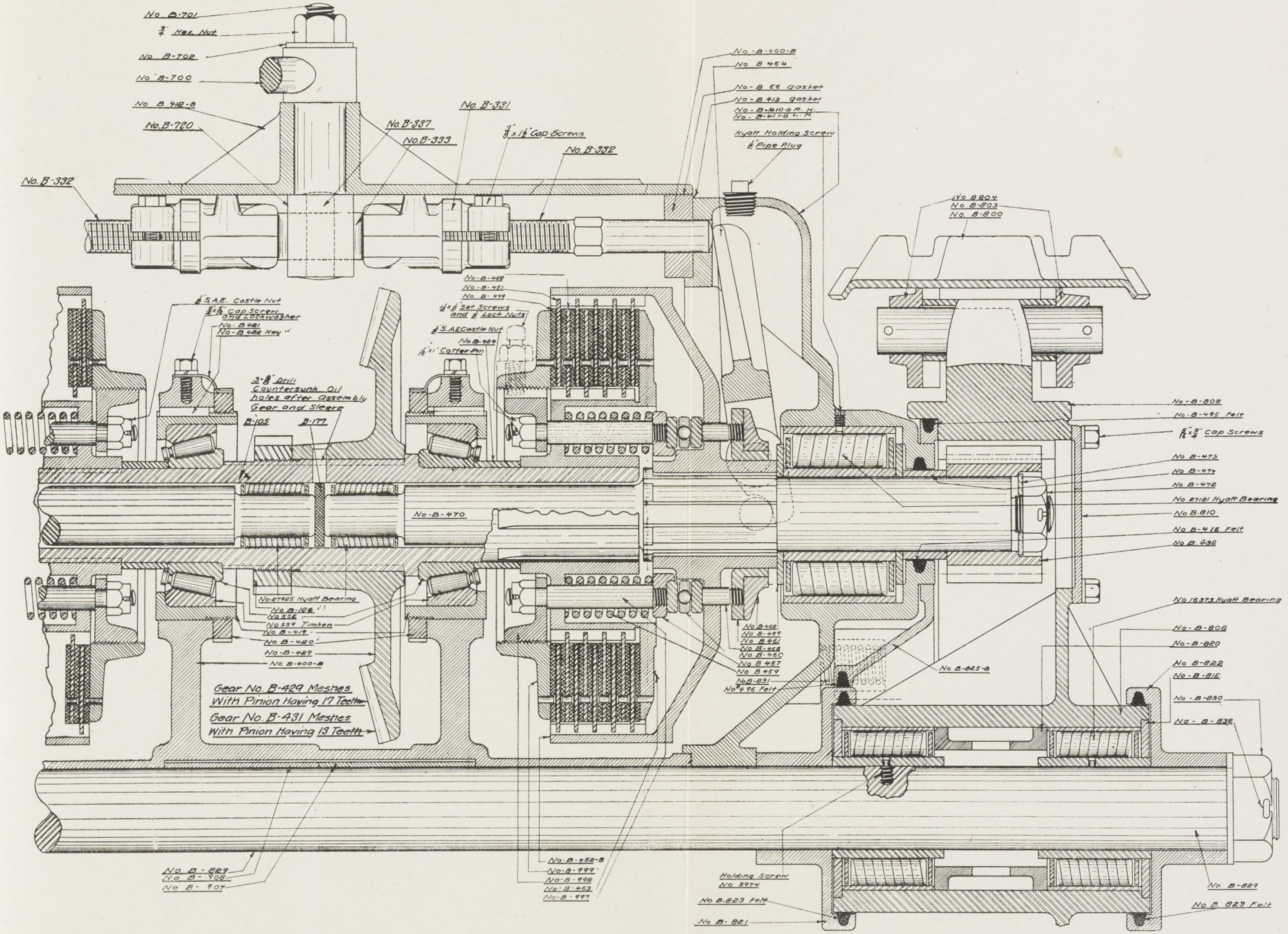
CRANK SHAFT



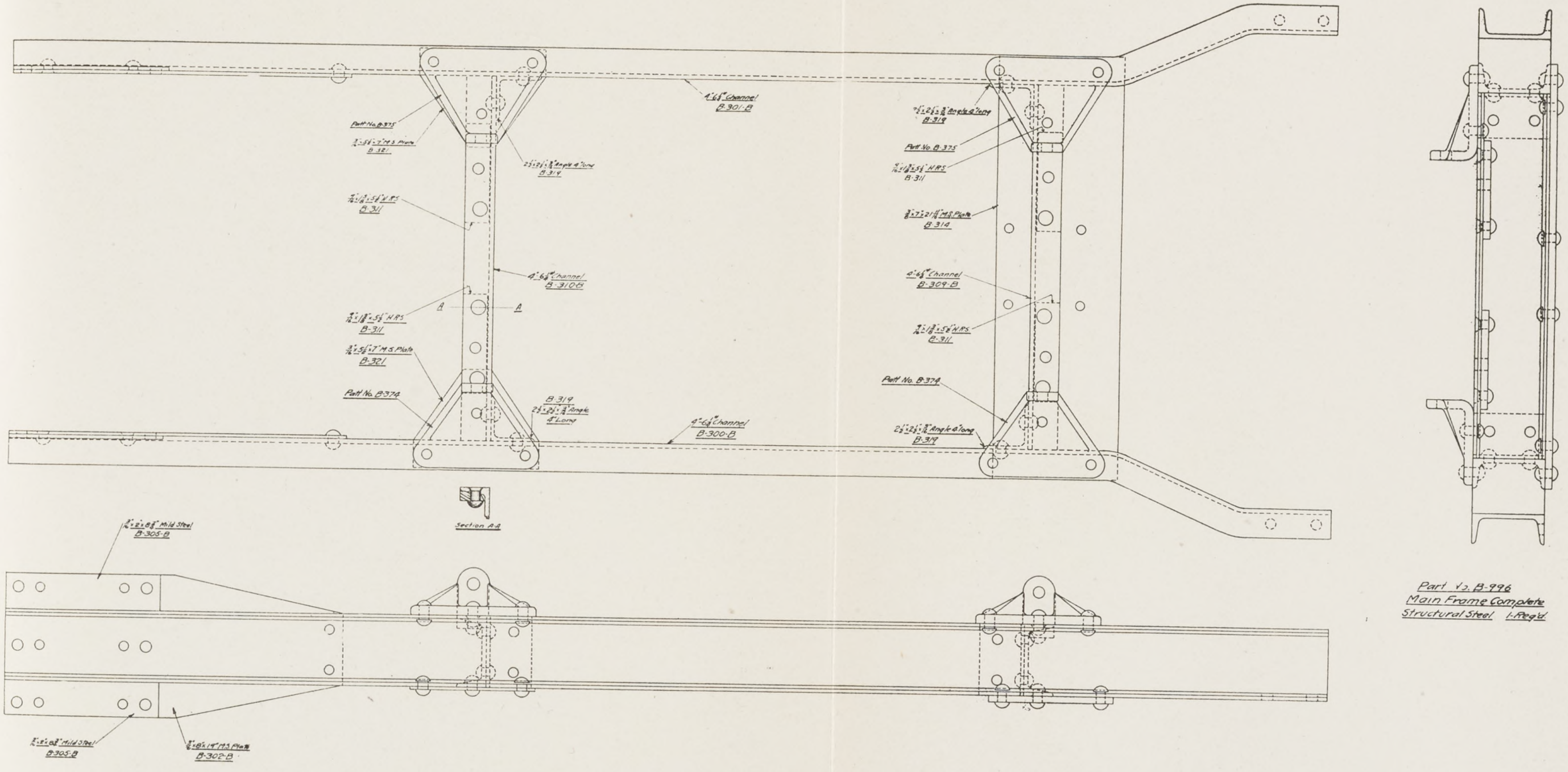
CAM SHAFT



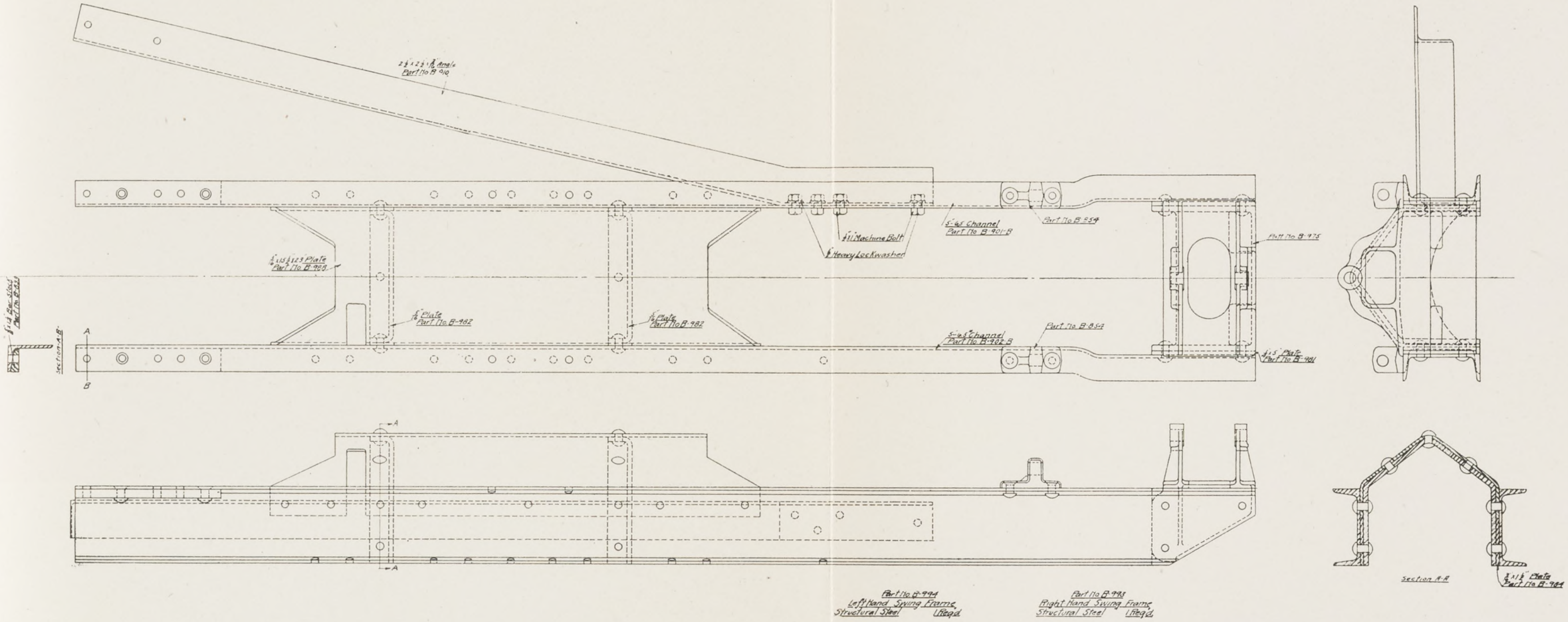
TRANSMISSION CASE



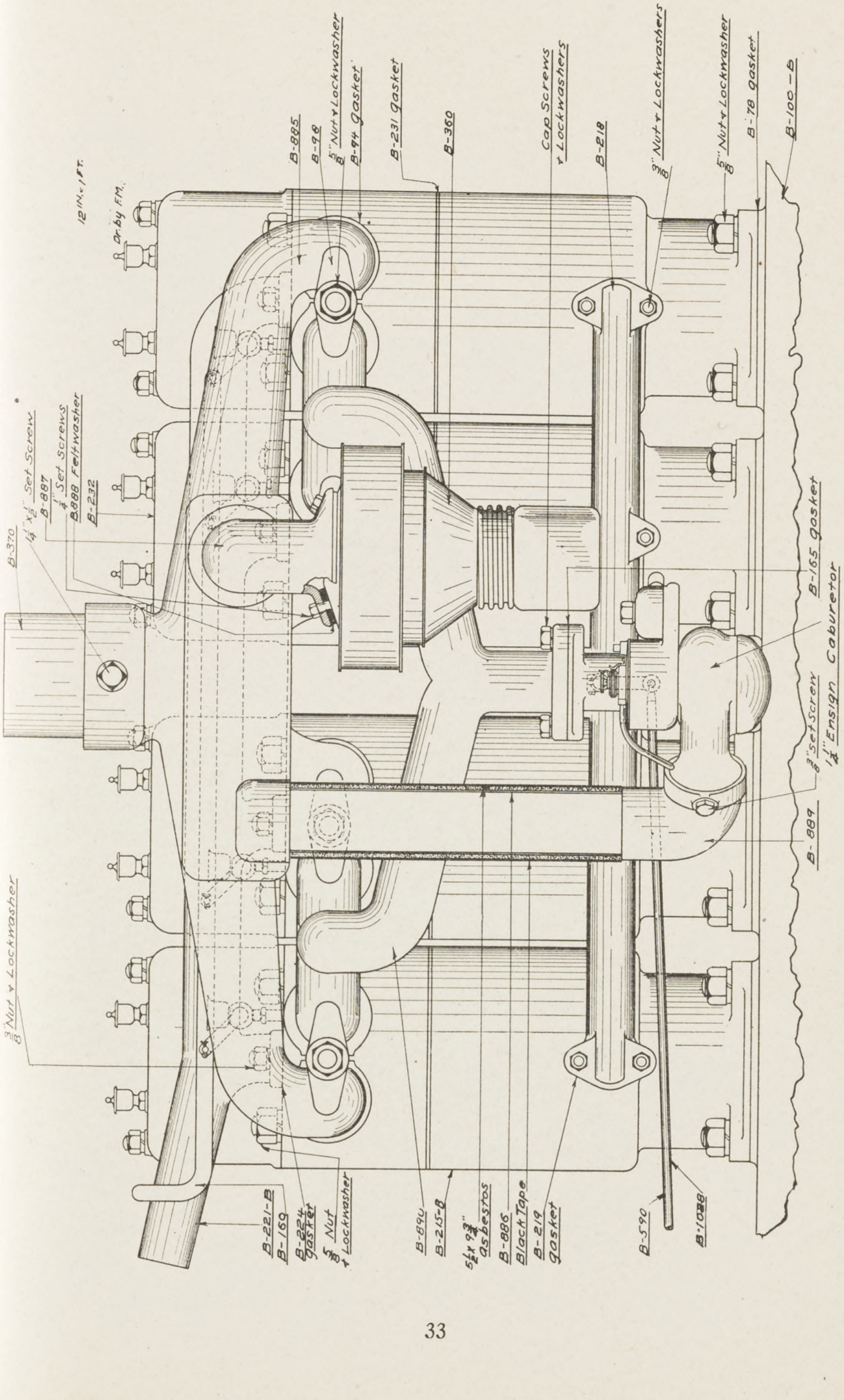
STEERING CLUTCH SHAFT


4"-6¼# Channel
B-301-B
Patt No. B-375
3/16"×5½"×7" M.S. Plate
B-321
2½"×2½"×3/16" Angle 4" Long
B-319
9/16"×1⅜"×5½" H.R.S.
B-311
4"-6¼# Channel
B-310-B
A
A
9/16"×1⅜"×5½" H.R.S.
B-311
3/16"×5½"×7" M.S. Plate
B-321
Patt No. B-374
B-319
2½"×2½"×3/16" Angle
4" Long
4"-6¼# Channel
B-300-B
Section A-A
2½"×2½"×3/16" Angle 4" Long
B-319
Patt. No. B-375
9/16"×1⅜"×5½" H.R.S.
B-311
3/8"×7"×21 11/16" M.S. Plate
B-314
4"-6¼# Channel
B-309-B
9/16"×1⅜"×5½" H.R.S.
B-311
Patt No. B-374
2½"×2½"×3/16" Angle 4" Long
B-319
3/16"×2"×8⅜" Mild Steel
B-305-B
3/16"×2"×8⅜" Mild Steel
B-305-B
3/8"×8"×14" M.S. Plate
B-302-B
Part No. B-996
Main Frame Complete
Structural Steel 1-Req'd.

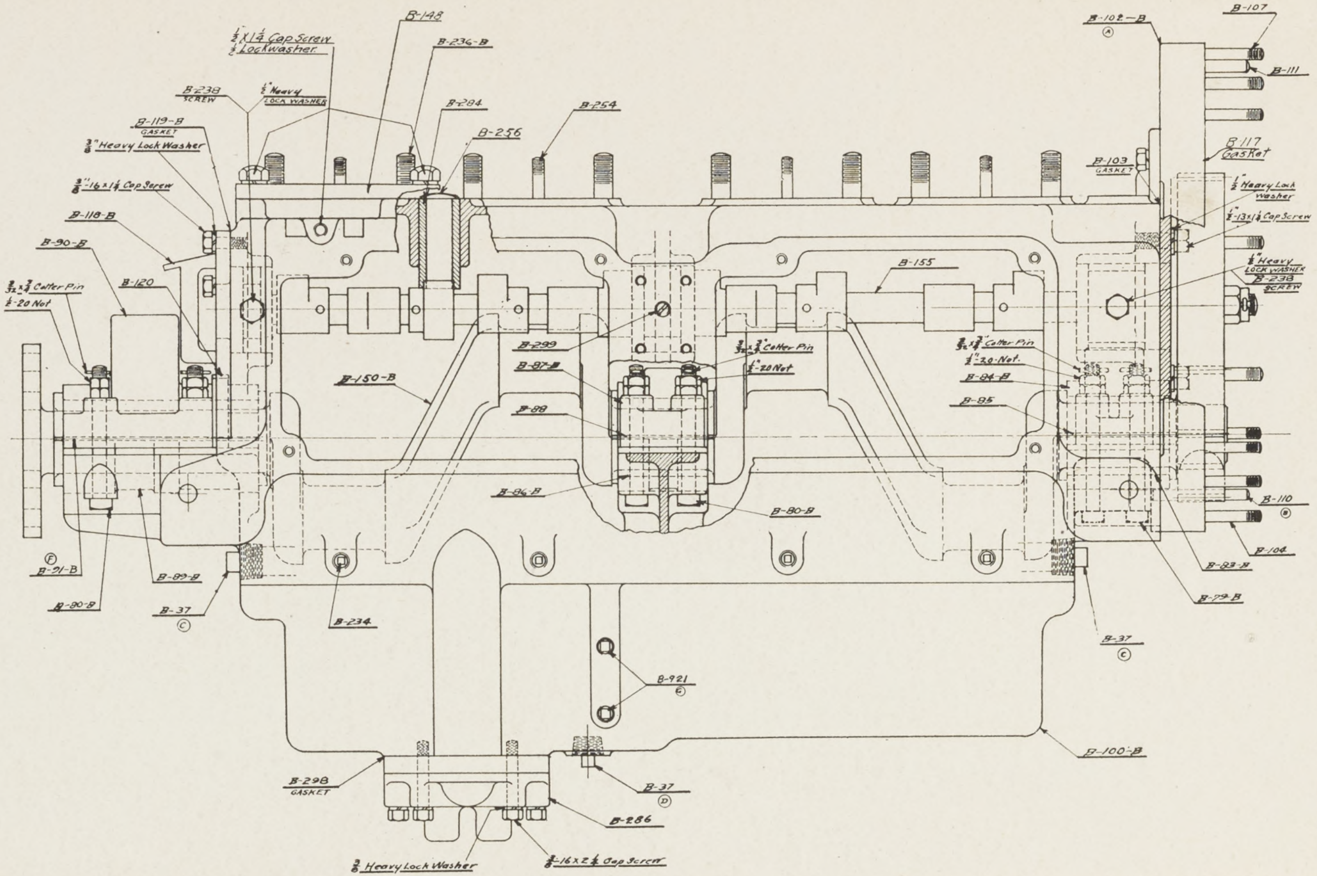
MAIN FRAME


2½ x 2½ x 3/16 Angle
Part No B 910
3/16 x 15½ x 23 Plate
Part No B-988
5/16 Plate
Part No B-982
5/16 Plate
Part No B-982
⅝ x 1 Machine Bolt
⅝ Heavy Lockwasher
5-6.5 Channel
Part No B-901-B
Part No B-854
Part No B-975
5-6.5 Channel
Part No B-902-B
Part No B-854
¼ x 15 Plate
Part No B-981
Bar Steel
Section-A-B-
A
B
A
A
Section A-A
Plate
Part No B-984
Part No B-994
Left Hand Swing Frame
Structural Steel 1 Reqd
Part No B-993
Right Hand Swing Frame
Structural Steel 1 Reqd

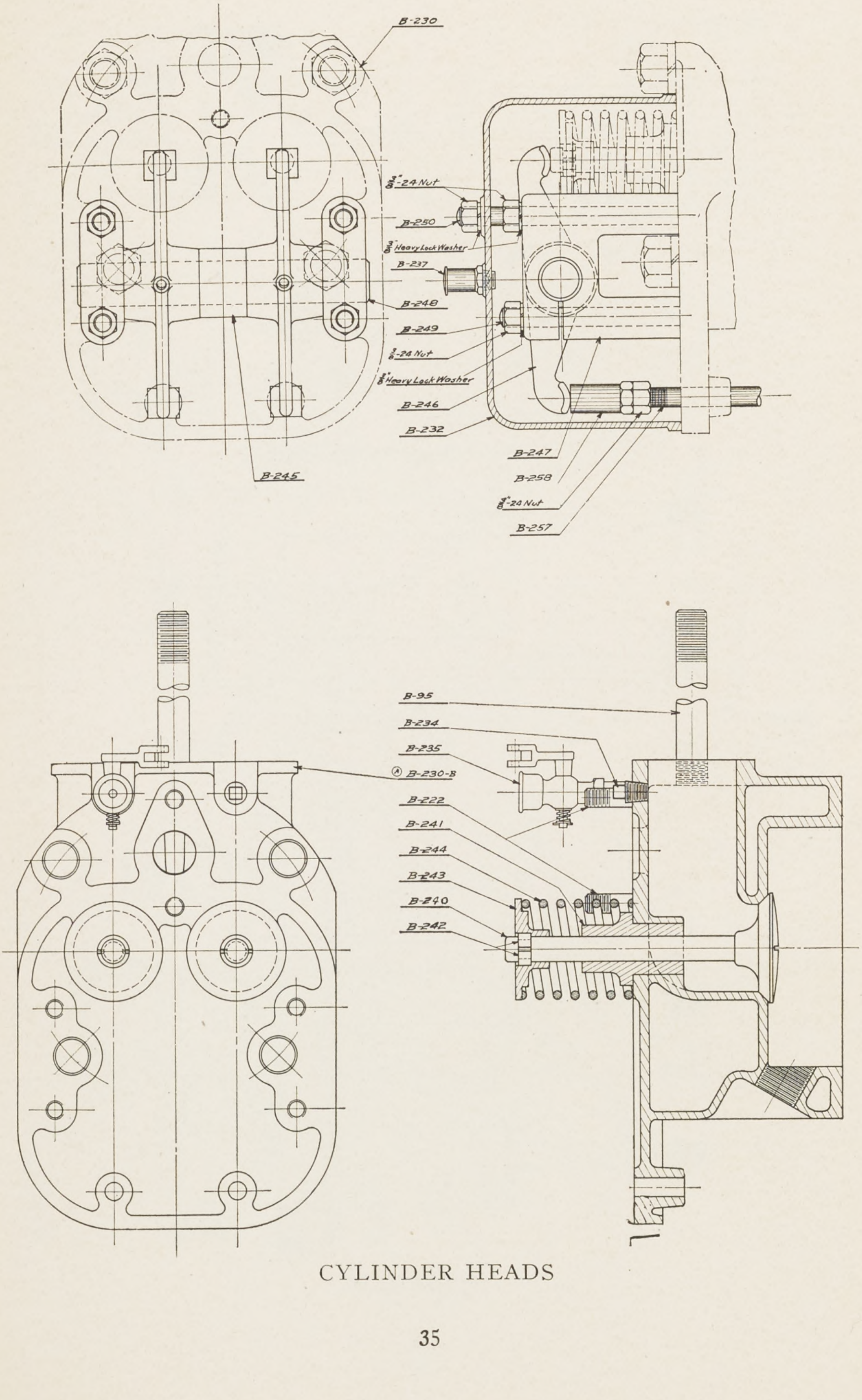
SWING FRAME



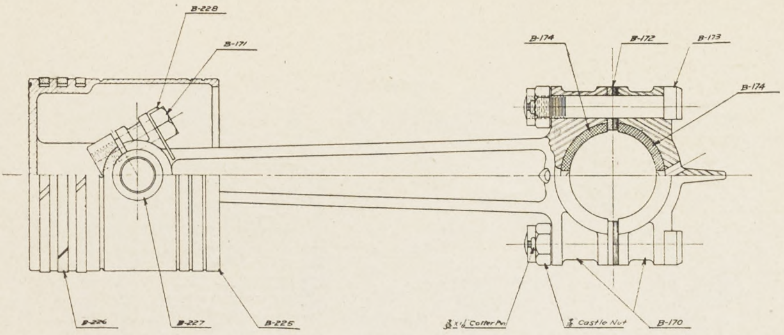
MANIFOLDS AND CYLINDERS



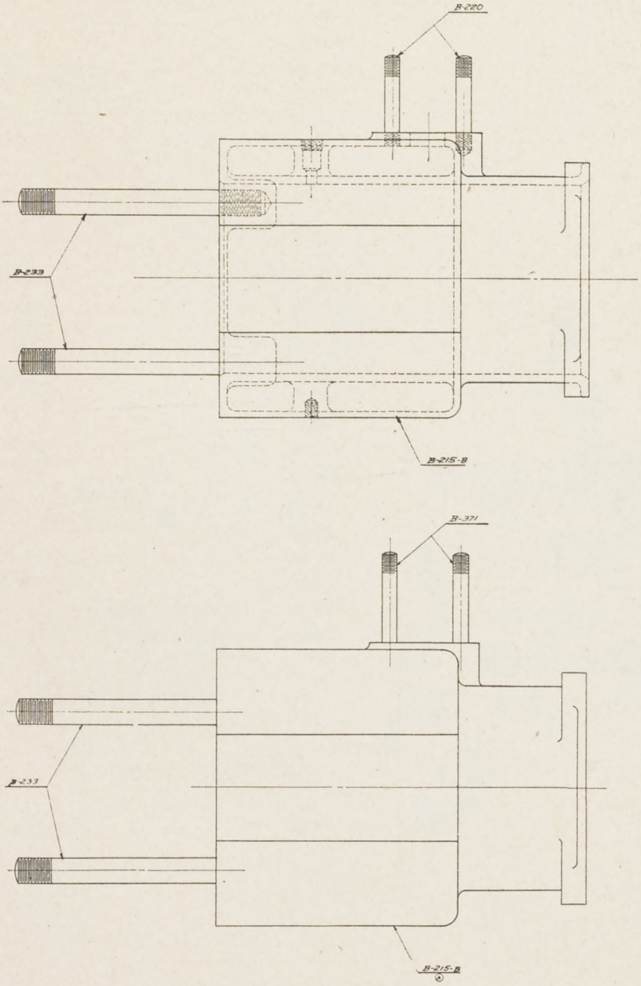
CRANK CASE AND SHAFT



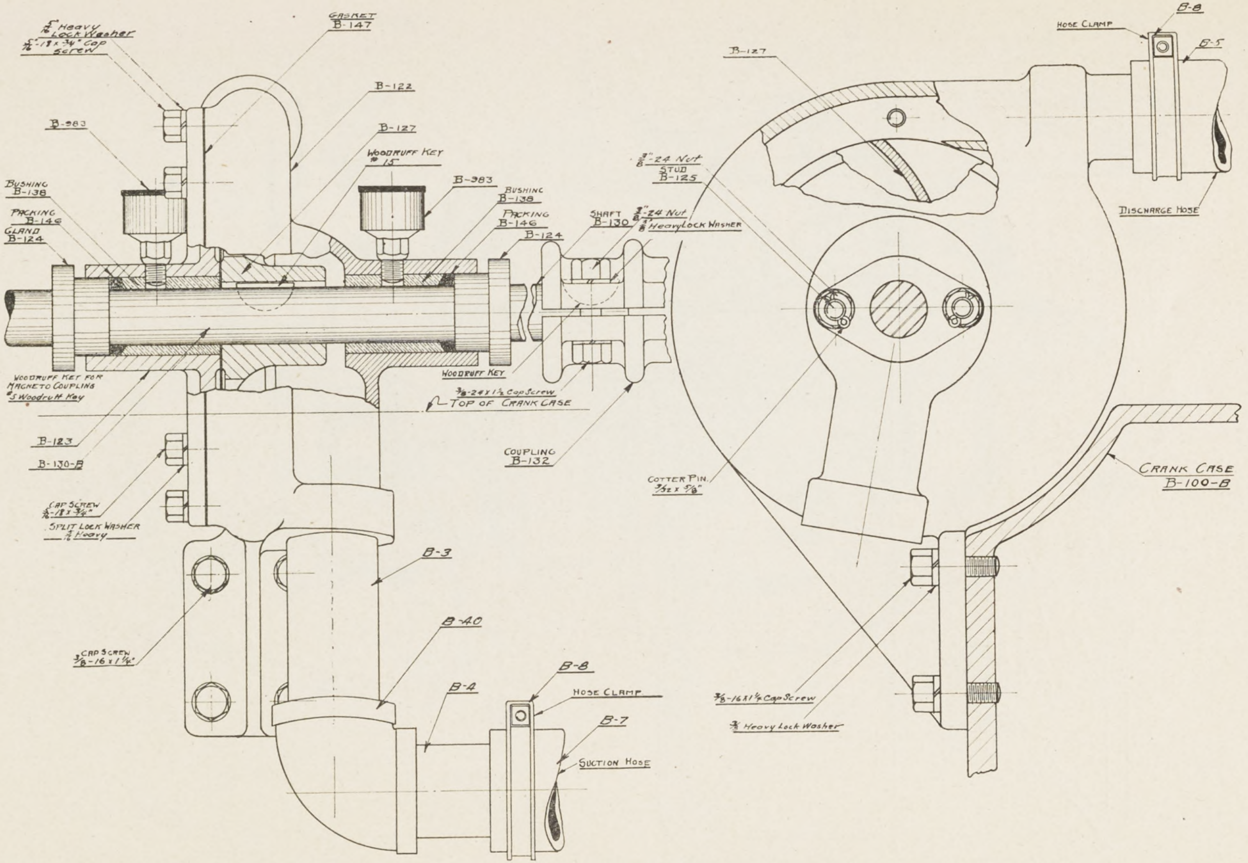
CYLINDER HEADS



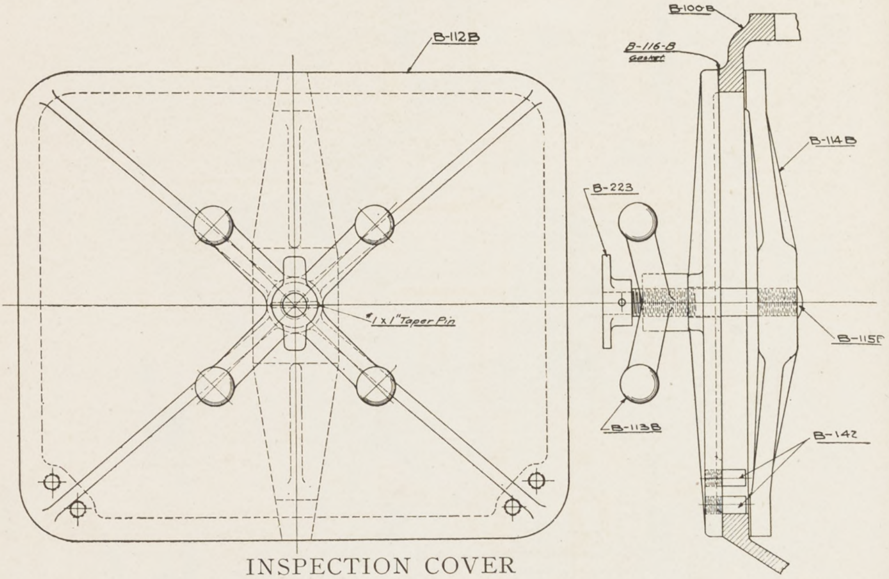
CONNECTING ROD



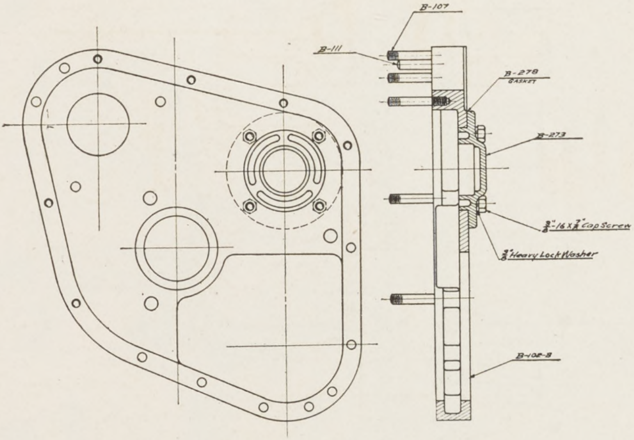
CYLINDERS


5/16" Heavy Lock Washer
5/16"-18 x 3/4" Cap Screw
Gasket B-147
B-122
B-983
B-127
Woodruff Key #15
B-983
Bushing B-138
Packing B-146
Gland B-124
Bushing B-138
Packing B-146
B-124
Shaft B-130
3/8"-24 Nut
3/8" Heavy Lock Washer
3/8"-24 Nut
Stud B-125
B-127
Hose Clamp
B-8
B-5
Discharge Hose
Woodruff Key for Magneto Coupling #5 Woodruff Key
Woodruff Key
3/8-24 x 1 1/2 Cap Screw
Top of Crank Case
B-123
B-130-B
Coupling B-132
Cotter Pin 3/32 x 5/8"
Crank Case B-100-B
Cap Screw 5/16-18 x 3/4"
Split Lock Washer 5/16 Heavy
B-3
B-40
3/8 Cap Screw -16 x 1 1/4"
B-8
B-4
Hose Clamp
B-7
Suction Hose
3/8-16 x 1 1/4 Cap Screw
3/8 Heavy Lock Washer

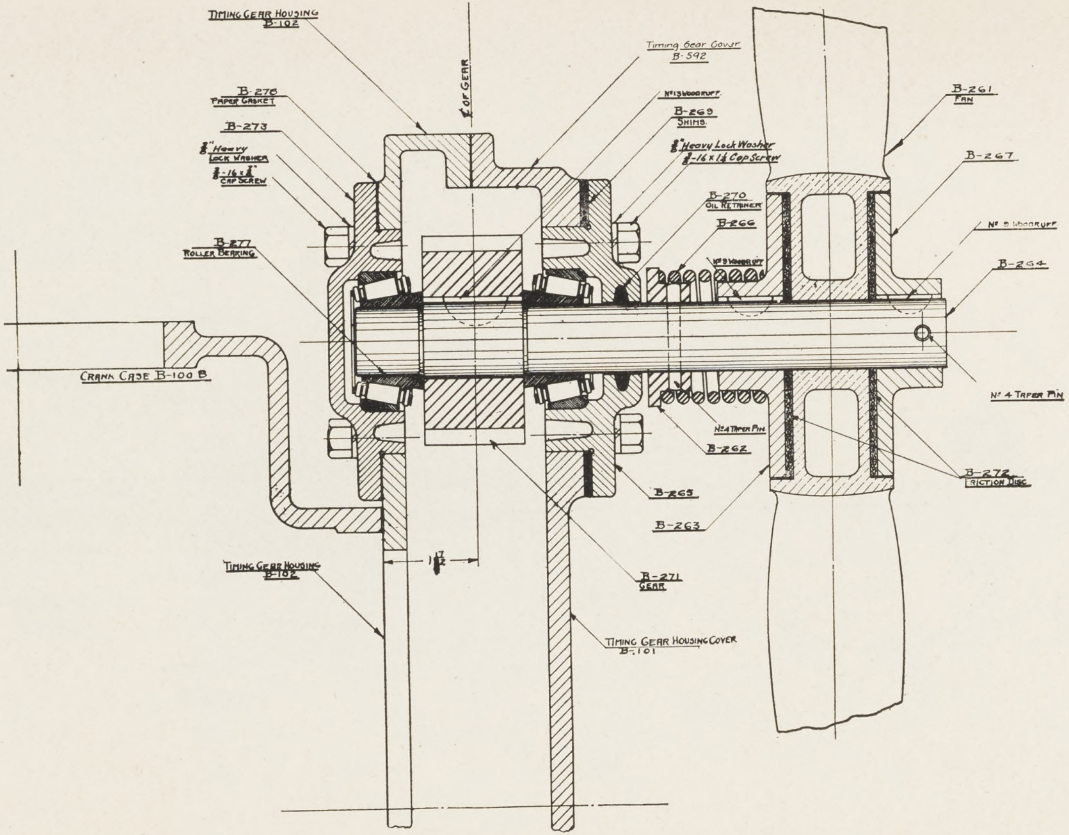
WATER PUMP



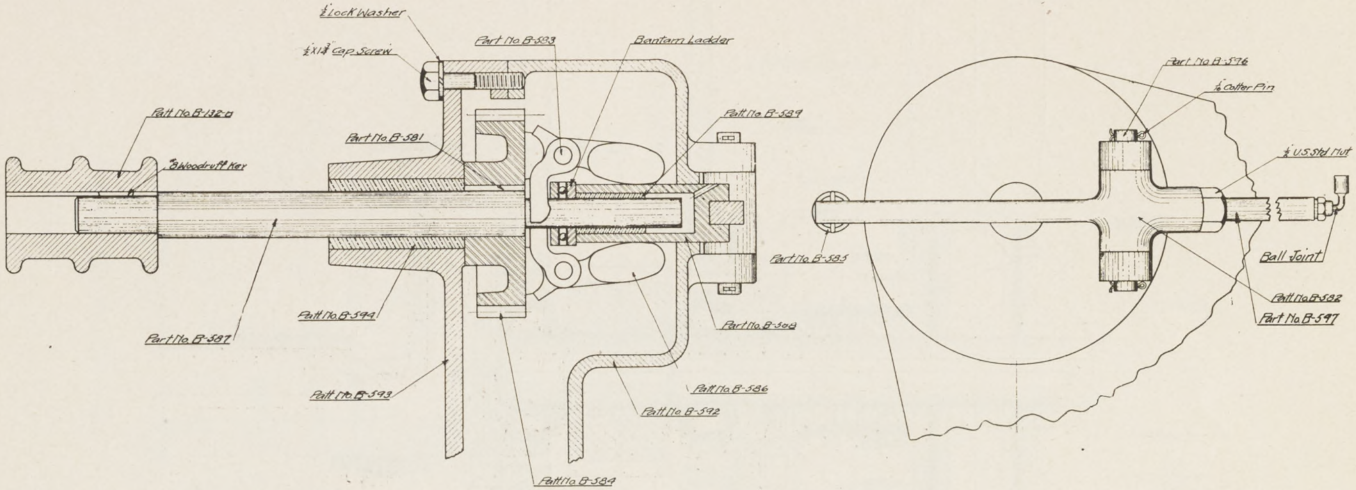
INSPECTION COVER



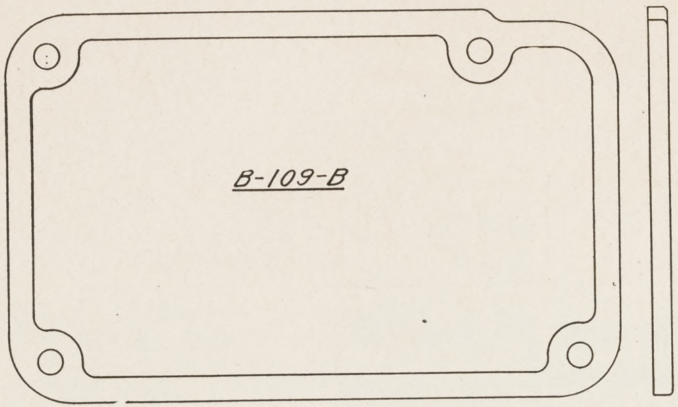
TIMING GEAR COVER


TIMING GEAR HOUSING B-102
B-276 PAPER GASKET
B-273
$\frac{3}{8}$" Heavy LOCK WASHER
$\frac{3}{8}$-16 x $\frac{7}{8}$" CAP SCREW
B-277 ROLLER BEARING
CRANK CASE B-100 B
℄ OF GEAR
$1\frac{7}{32}$
TIMING GEAR HOUSING B-102
Timing Gear Cover B-592
No 13 WOODRUFF.
B-269 SHIMS.
$\frac{3}{8}$" Heavy Lock Washer
$\frac{3}{8}$-16 x $1\frac{1}{4}$ Cap Screw
B-270 OIL RETAINER
B-266
No 9 WOODRUFF
B-261 FAN
B-267
No 9 Woodruff
B-264
No 4 TAPER PIN
No 4 TAPER PIN
B-262
B-272 FRICTION DISC
B-265
B-263
B-271 GEAR
TIMING GEAR HOUSING COVER B-101

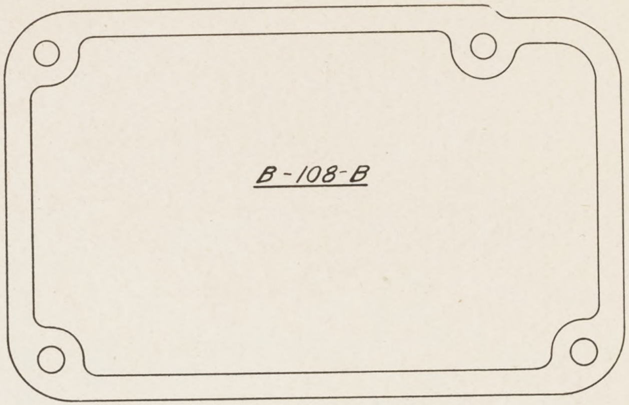
FAN


½ Lock Washer
½X1¾" Cap Screw
Part No B-583
Bantam Ladder
Part No B-596
1/16 Cotter Pin
Part No B-132-a
#8 Woodruff Key
Part No B-581
Part No B-589
½ U.S. Std Nut
Part No B-585
Ball Joint
Part No B-582
Part No B-597
Part No B-594
Part No B-587
Part No B-588
Part No B-593
Part No B-586
Part No B-592
Part No B-584

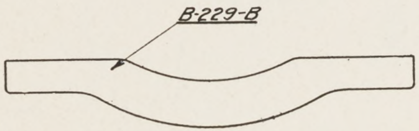
GOVERNOR



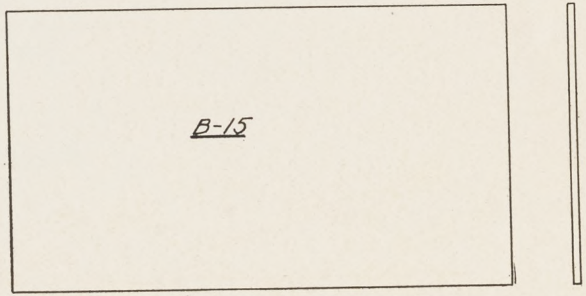
CRANK CASE COVER



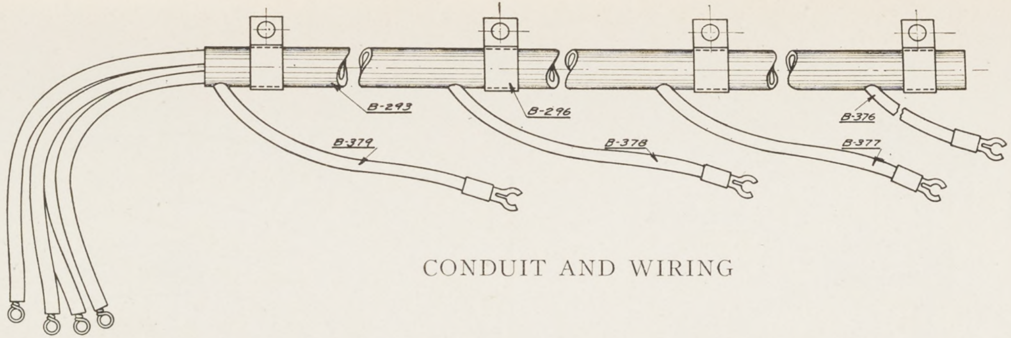
GASKET FOR B-109B



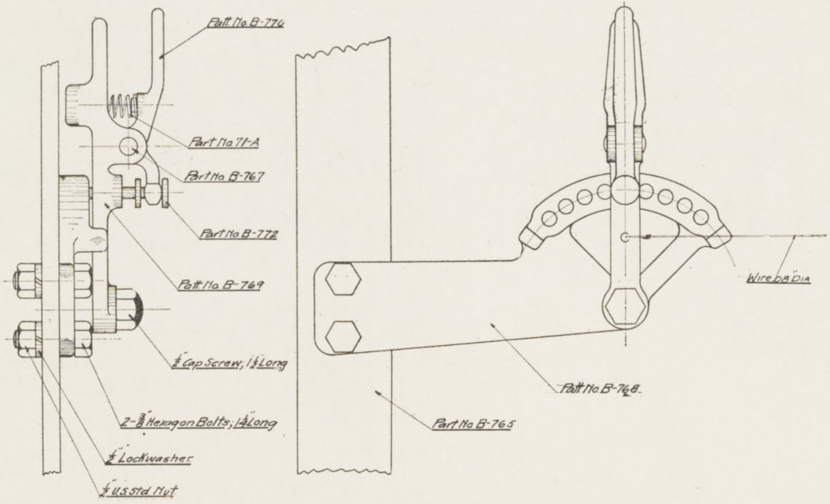
OIL SPLASH PAN



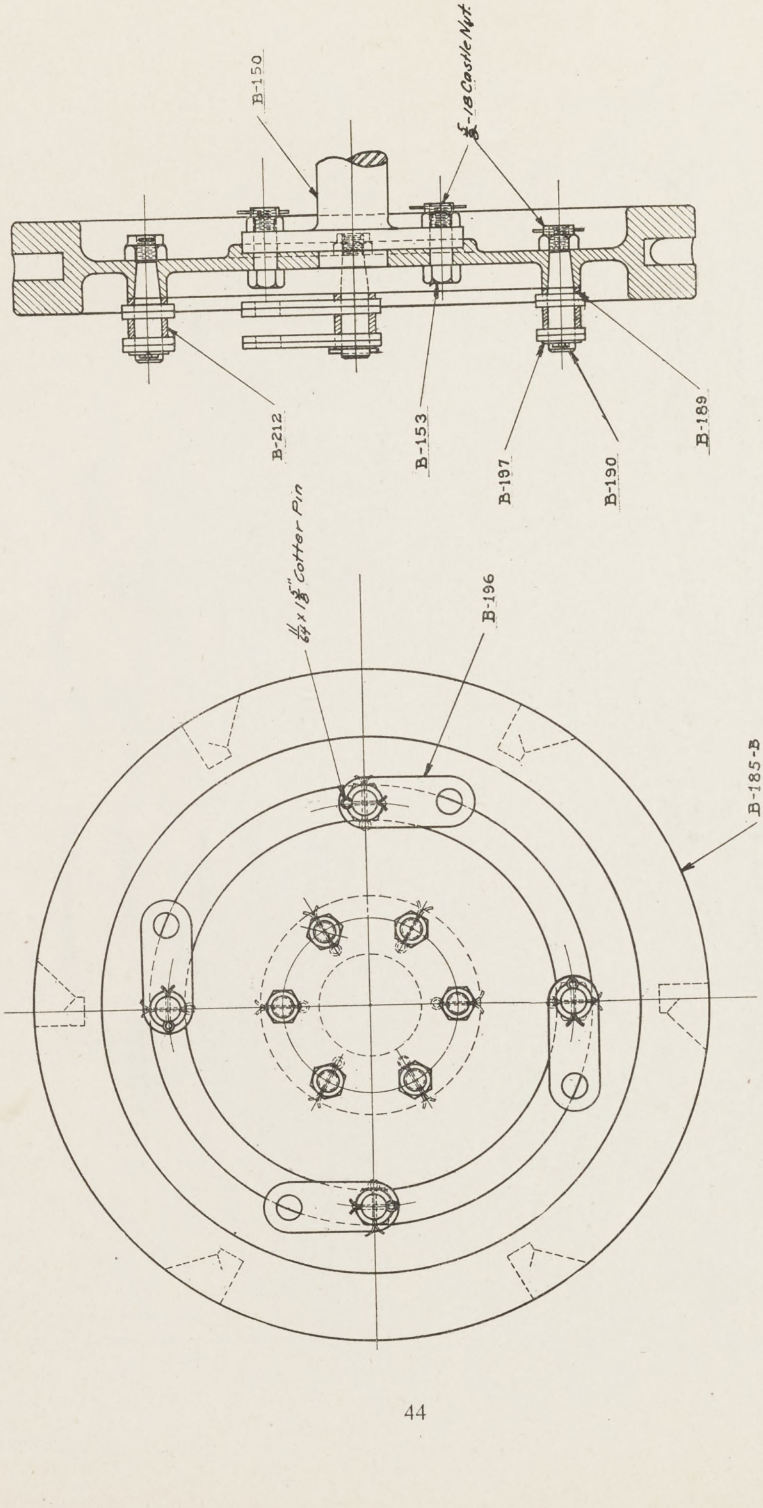
ASBESTOS SHEET FOR HOT AIR PIPE



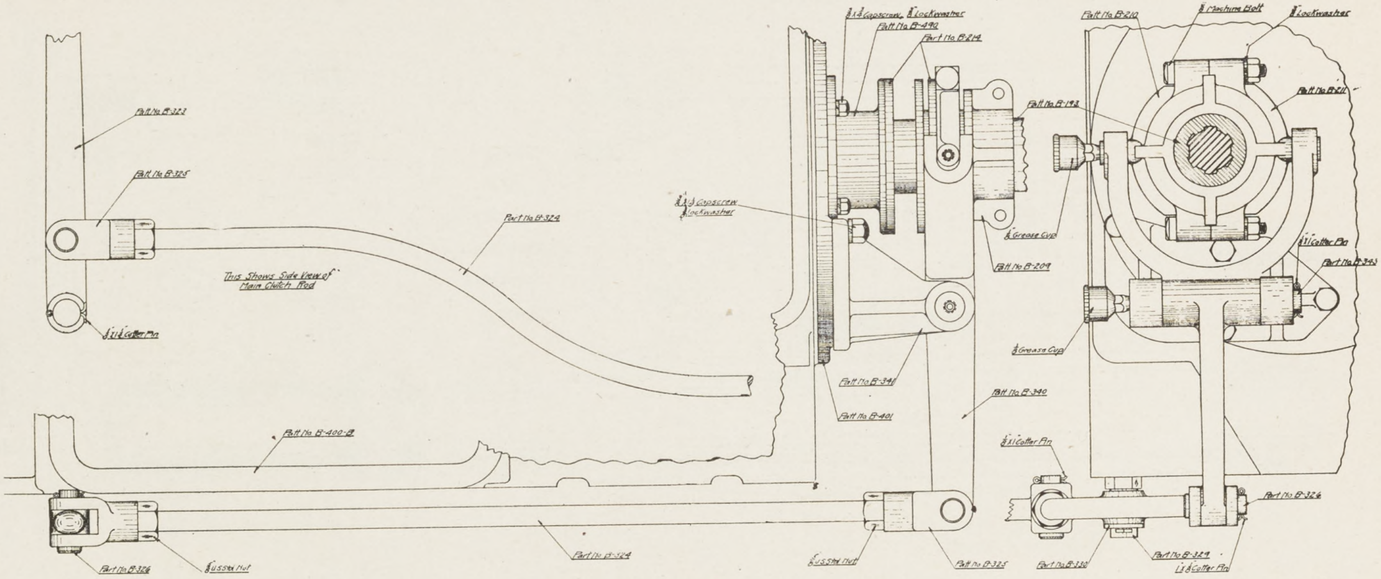
CONDUIT AND WIRING



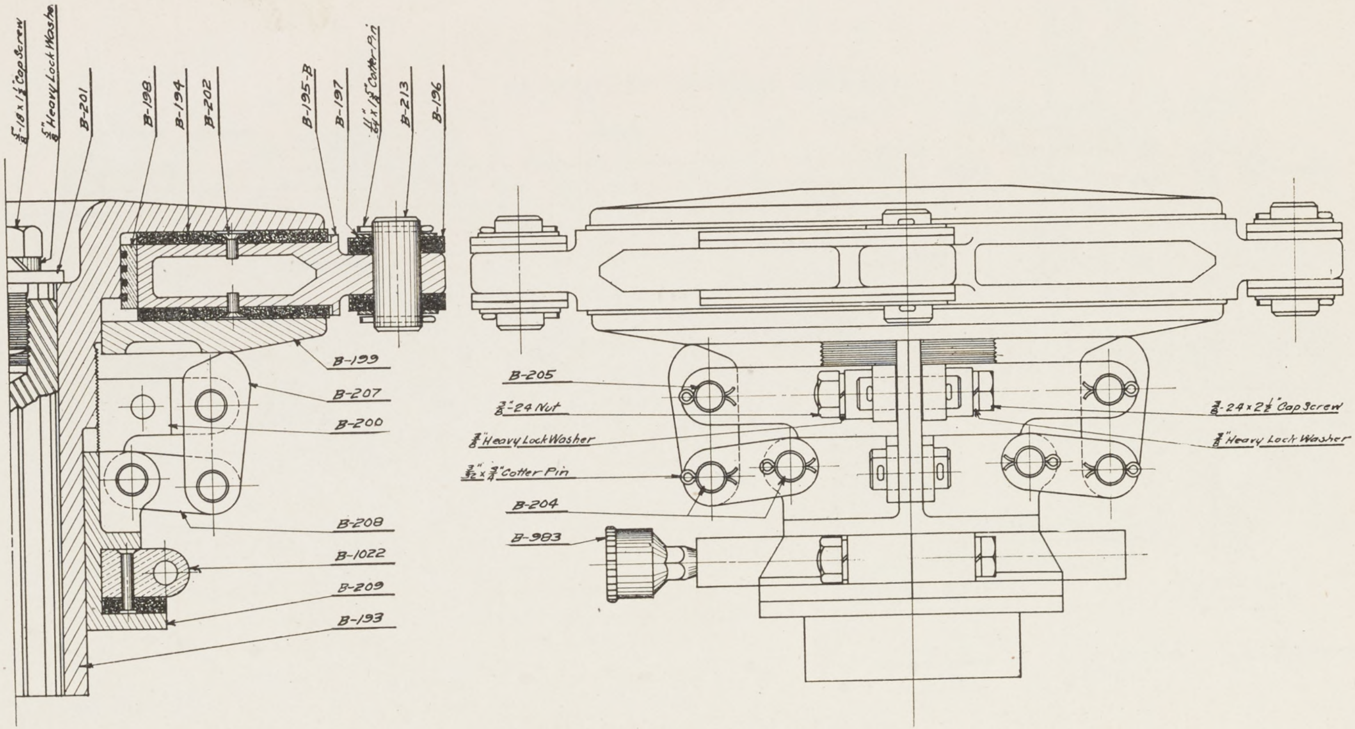
THROTTLE CONTROL


B-150
5/8-18 Castle Nut
B-212
B-153
B-197
B-190
B-189
11/64 x 1 5/8" Cotter Pin
B-196
B-185-B

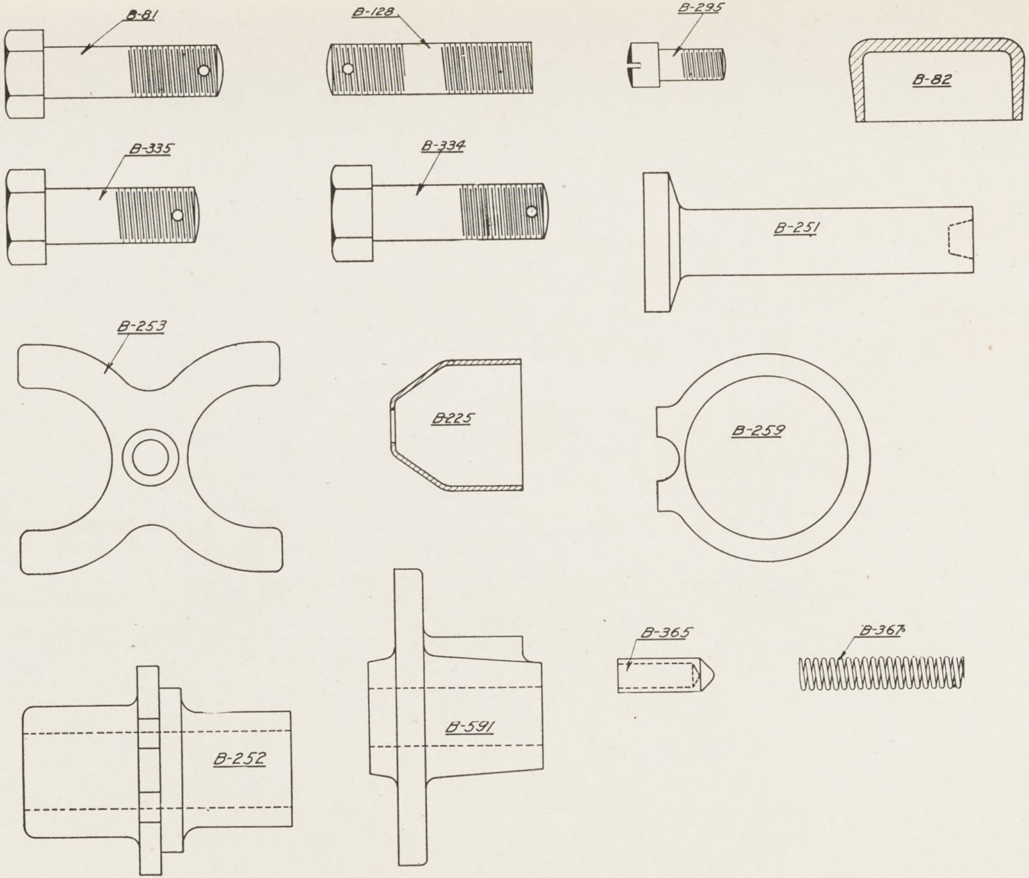
FLYWHEEL



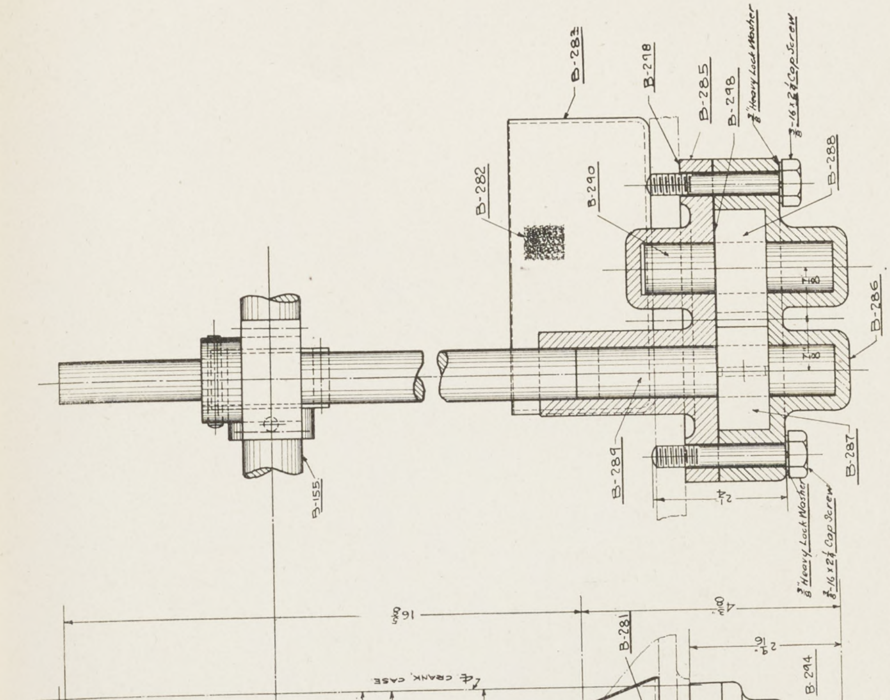
FLYWHEEL CLUTCH SHIFTER



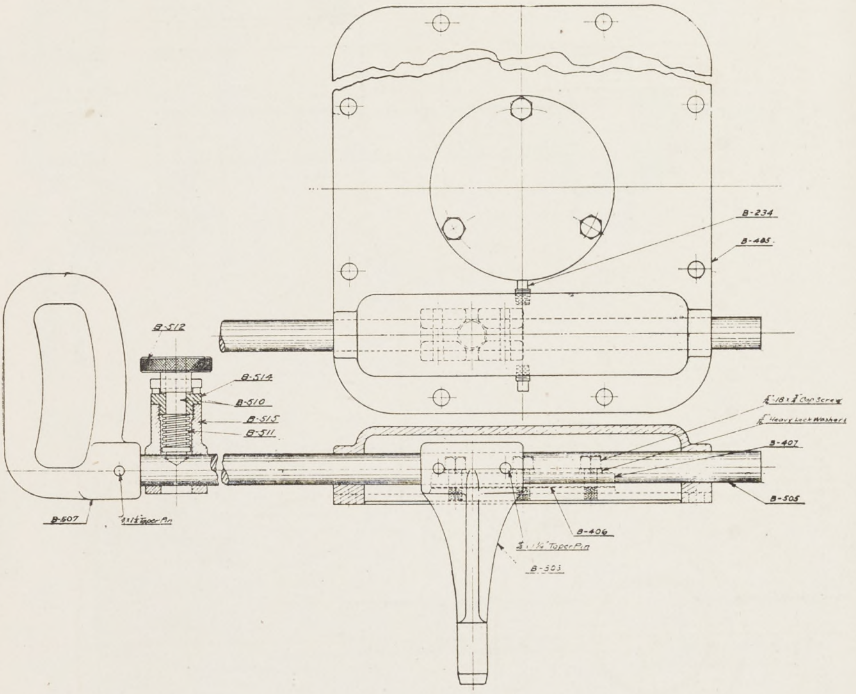
FLYWHEEL CLUTCH



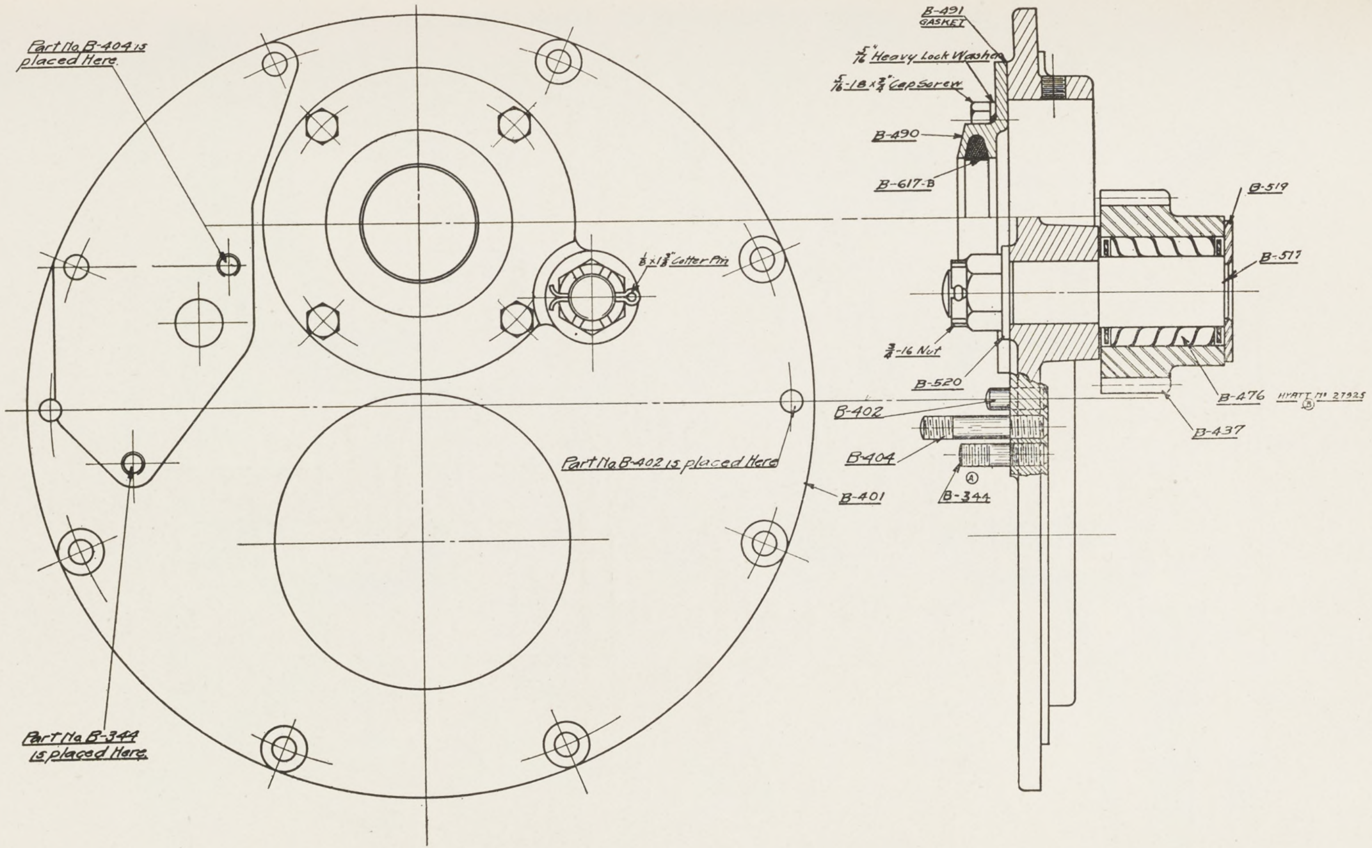
MISCELLANEOUS MOTOR PARTS


B-100-B
B-292
B-284
B-164
CRANK CASE
#4 x 1 1/4 Taper Pin
℄ CAM SHAFT
℄ CAM SHAFT
℄ CRANK CASE
B-291-B
B-281
B-294
B-100-B
BOTTOM OF CRANK CASE
#9 Woodruff Key
3/8" Heavy Lock Washer
3/8 x 1 1/2-16 Cap Screw
B-155
B-282
B-282½
B-290
B-298
B-285
B-298
3/8" Heavy Lock Washer
3/8-16 x 2 1/4 Cap Screw
B-288
B-286
B-287
B-289
3/8" Heavy Lock Washer
3/8-16 x 2 1/4 Cap Screw
2.99
4 3/4"
1.76"
4 15/16
1 15/16
1 15/16
7/8"
7/8"

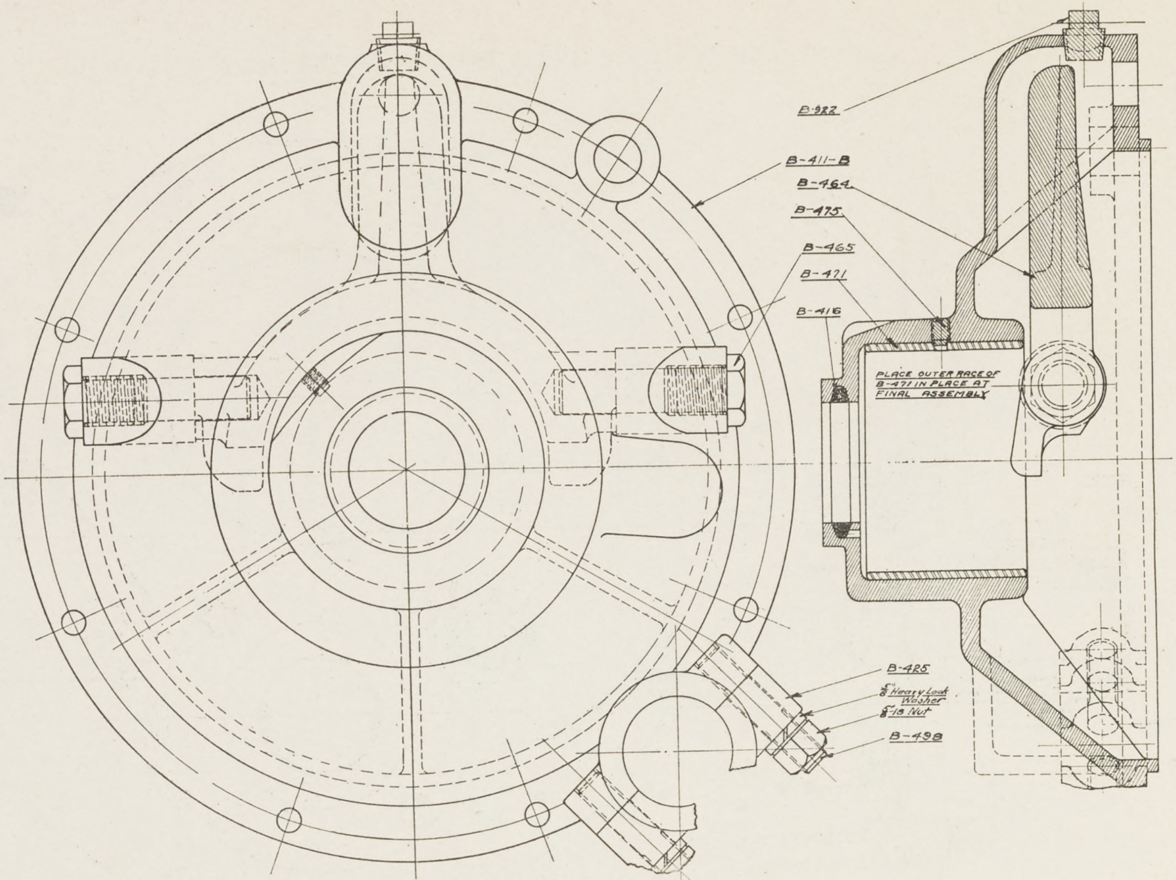
OIL PUMP


B-234
B-405
B-512
B-514
B-510
B-515
B-511
5/16"-18 x 3/4" Cap Screw
5/16" Heavy Lock Washers
B-407
B-505
B-507
1/8 x 1 1/2" Taper Pin
B-406
3/16 x 1 1/4" Taper Pin
B-503

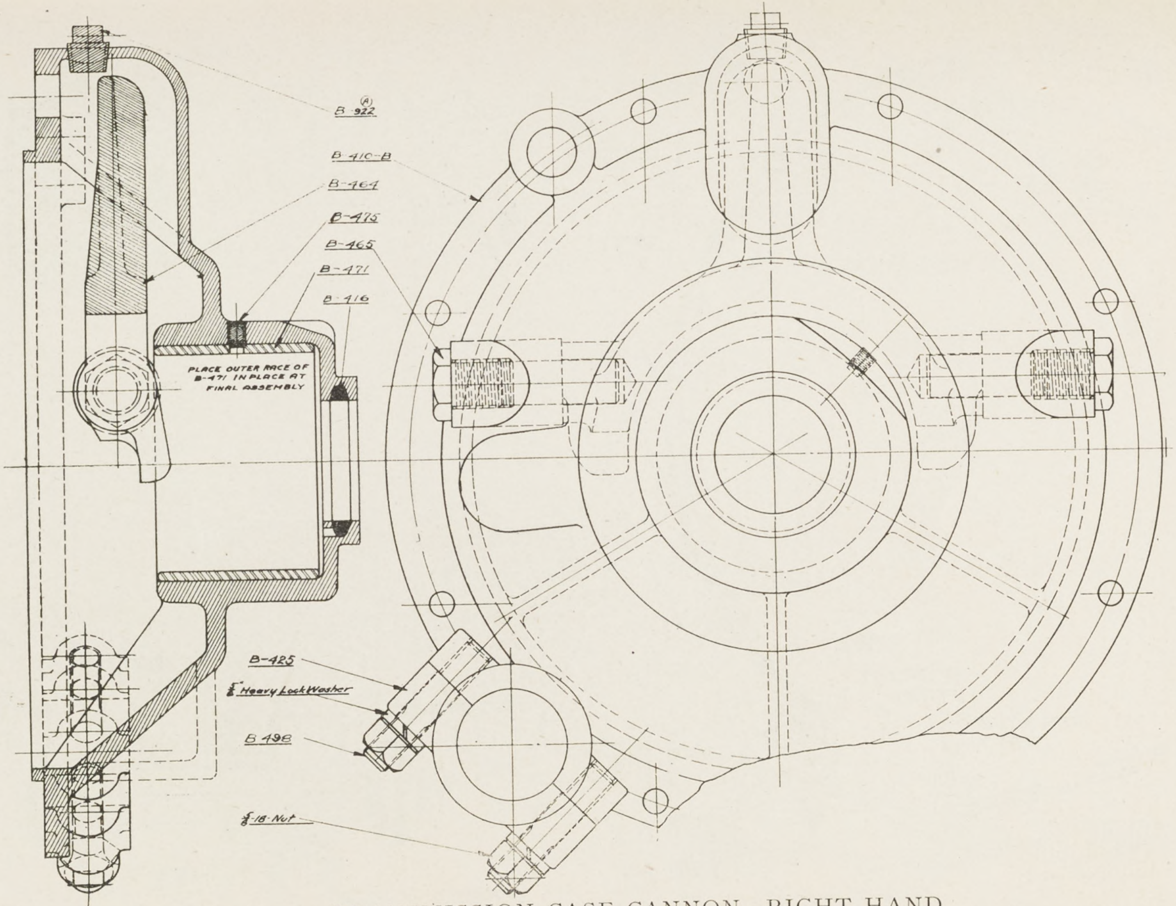
GEAR SHIFT



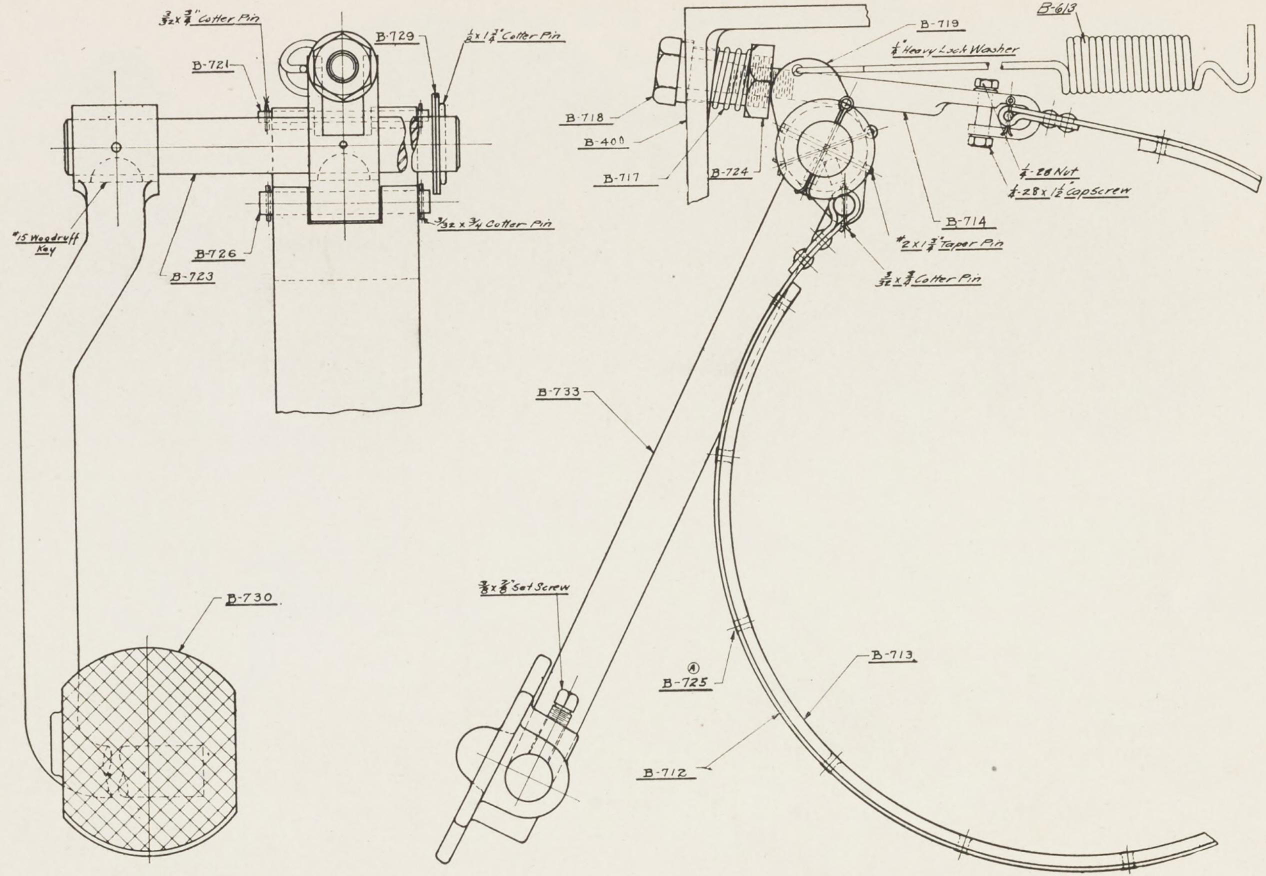
TRANSMISSION CASE HEAD AND REVERSE GEAR



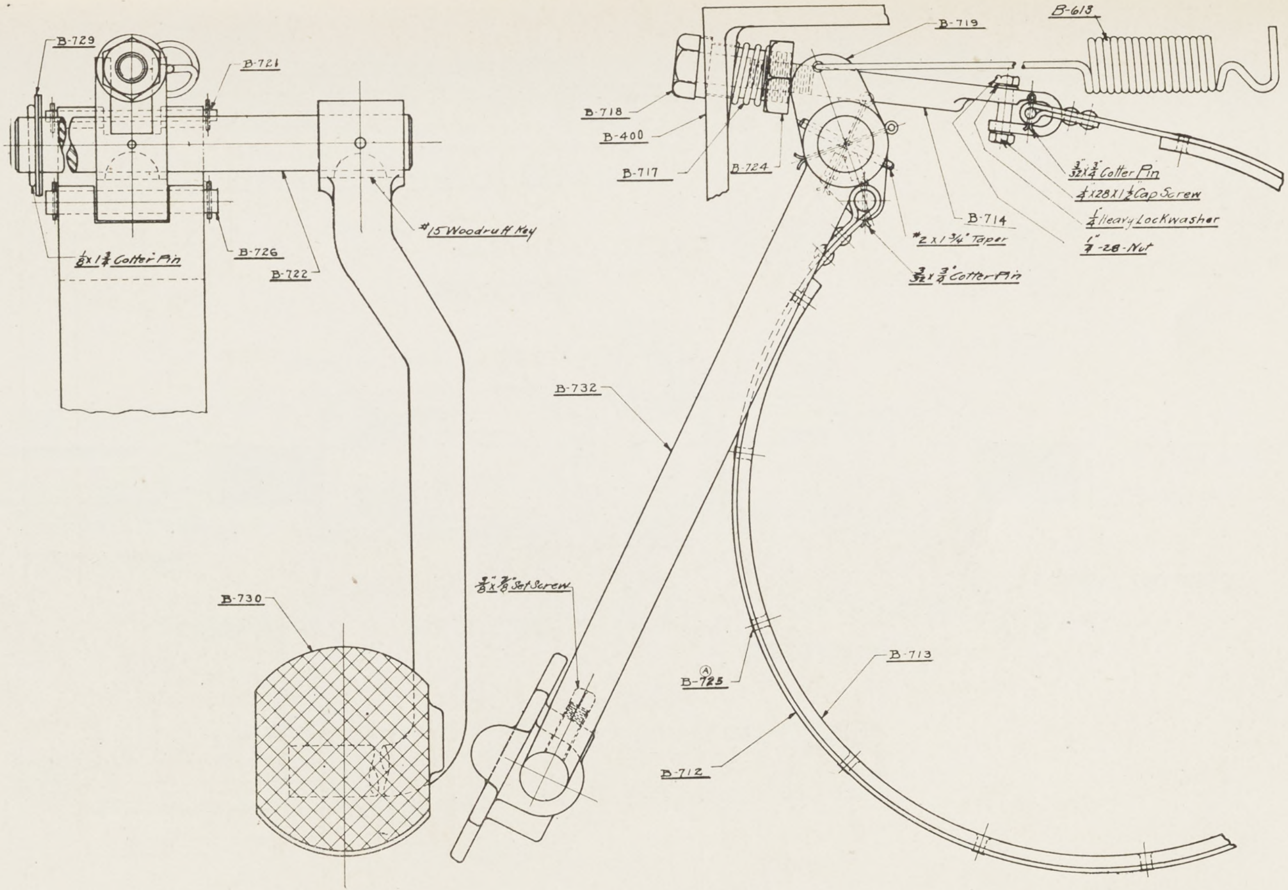
TRANSMISSION CASE CANNON—LEFT HAND



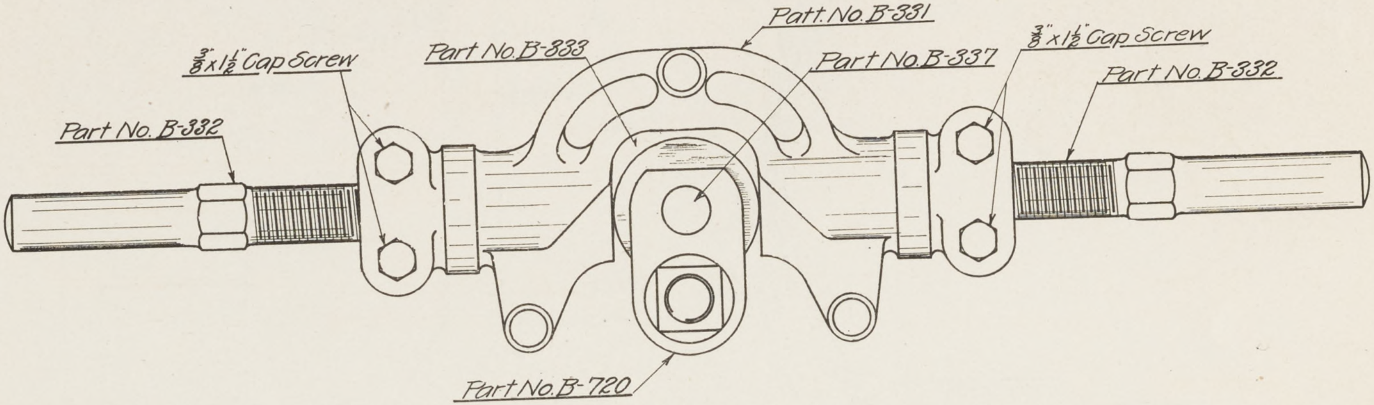
TRANSMISSION CASE CANNON—RIGHT HAND



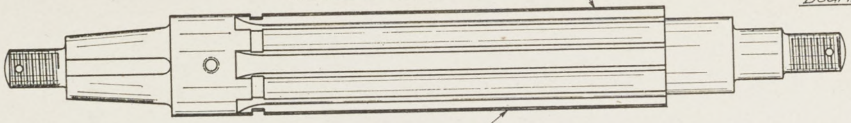
CLUTCH BRAKE—LEFT HAND



CLUTCH BRAKE—RIGHT HAND

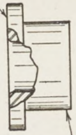


STEERING CLUTCH SHIFTER



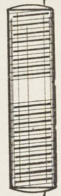
Bevel Pinion Transmission Shaft

Part No. B-97



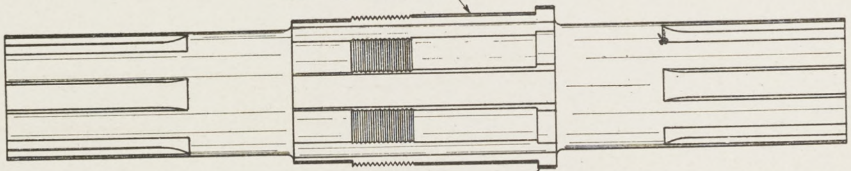
Bevel Pinion Shaft Thrust Bearing Retainer Collar

Part No. B-99



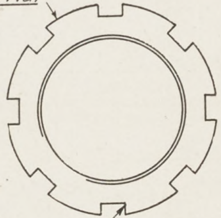
Flywheel Clutch Hub Stud

Part No. B-260



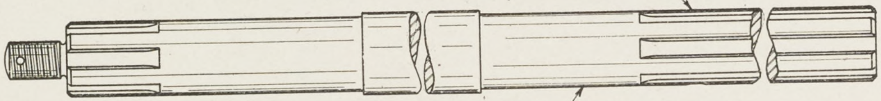
Bevel Gear Sleeve

Part No. B-105



Bevel Gear Sleeve Nut

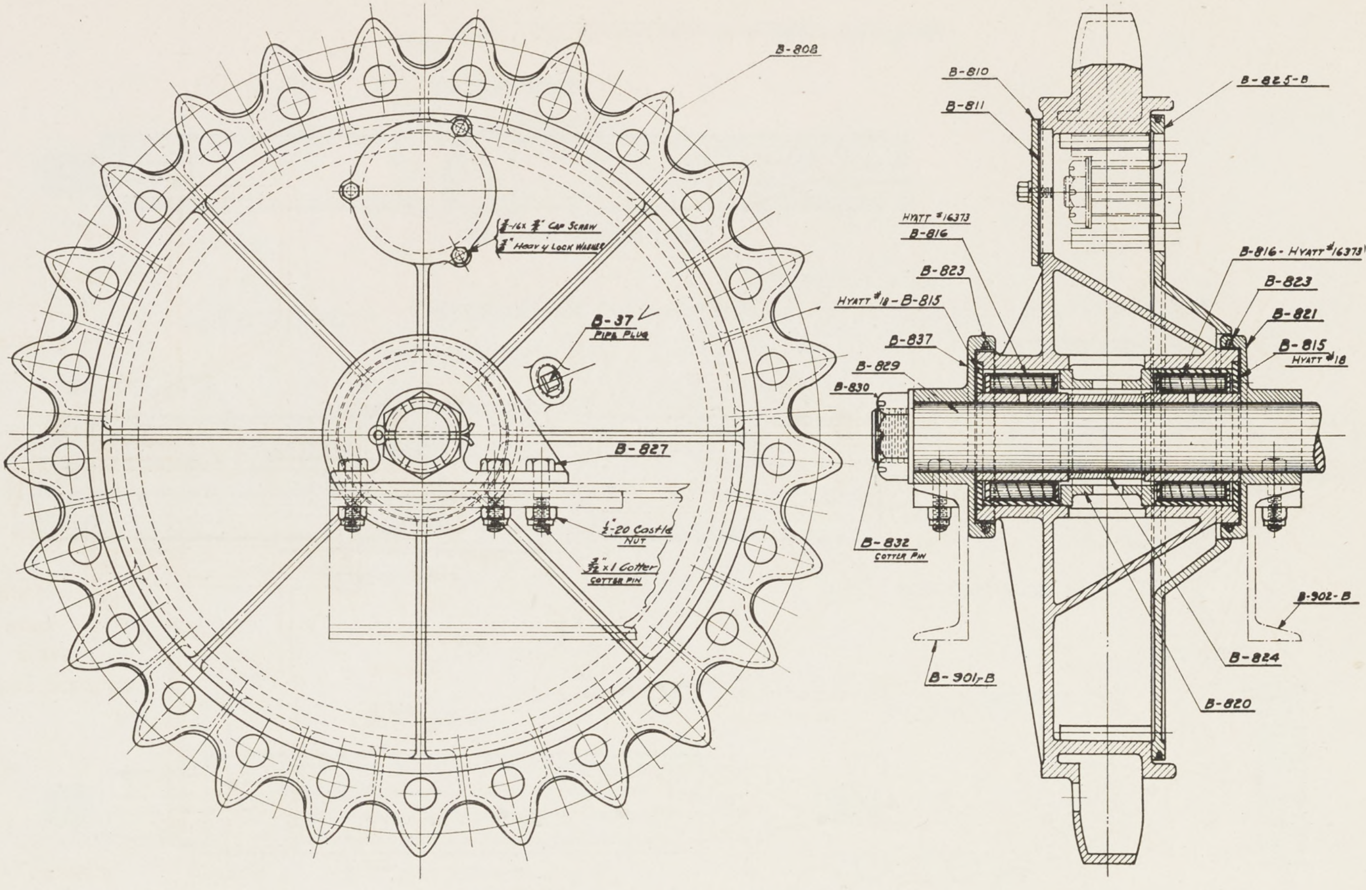
Part No. B-106



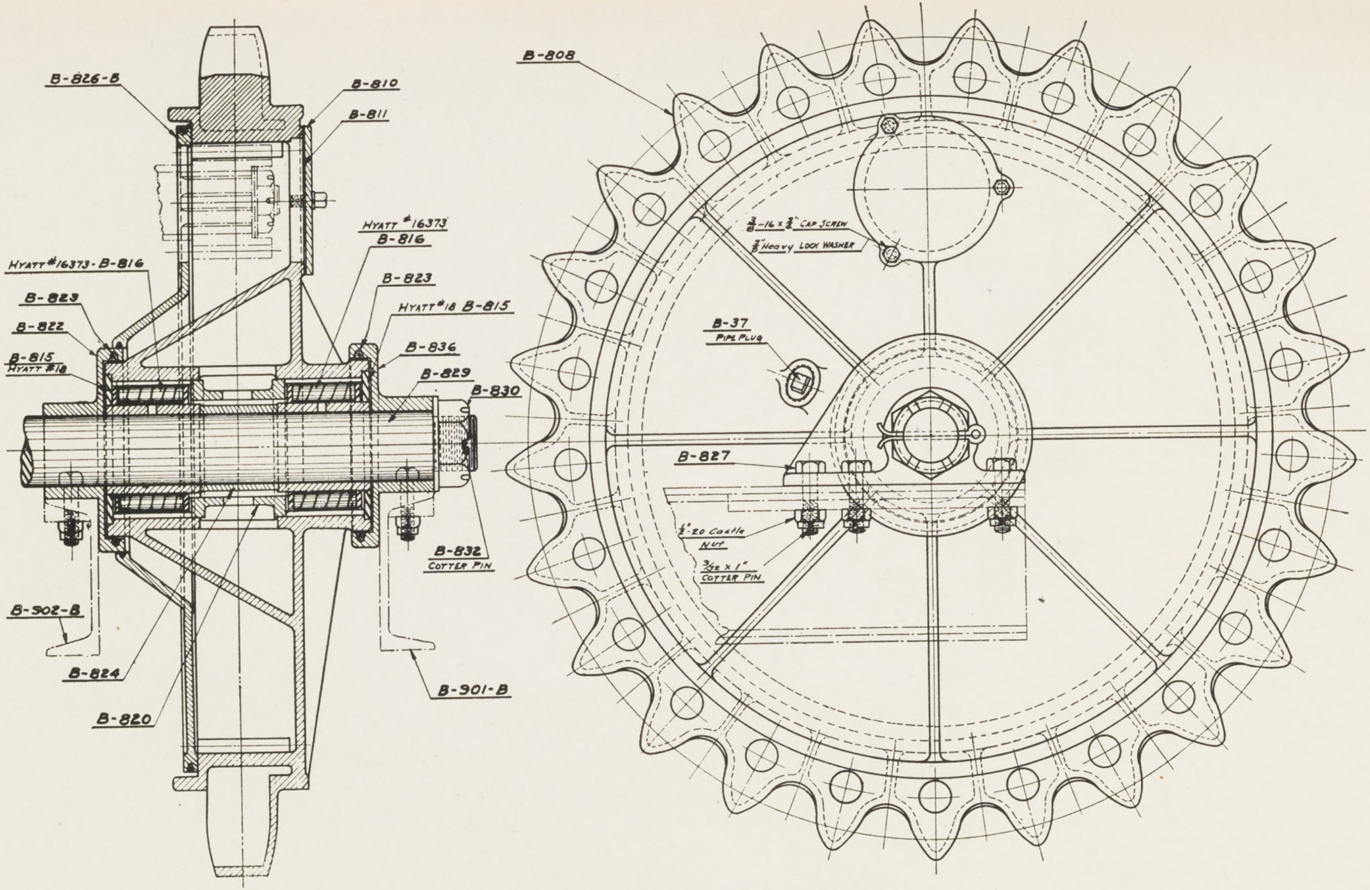
Upper Transmission Shaft

Part No. B-121

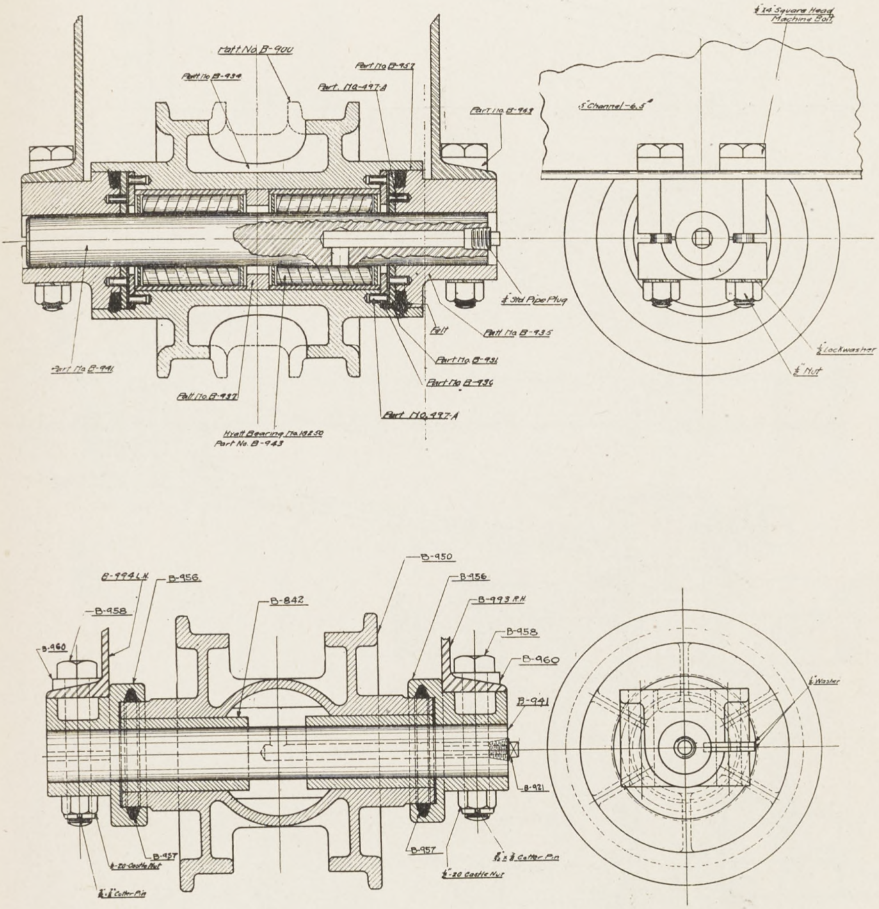
NOTE Later Model Tractors Have Trans. Parts Like These



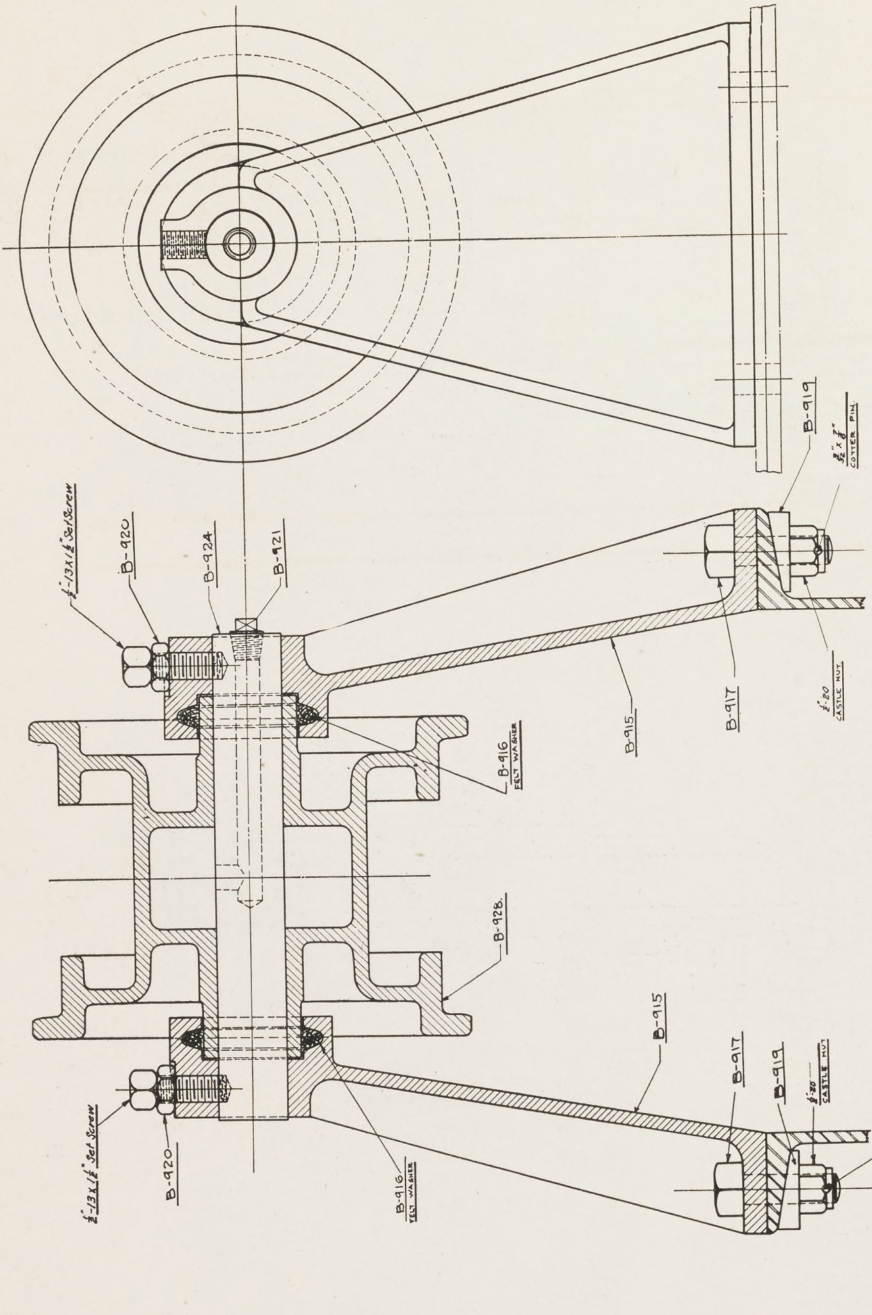
TRACK SPROCKET—RIGHT HAND



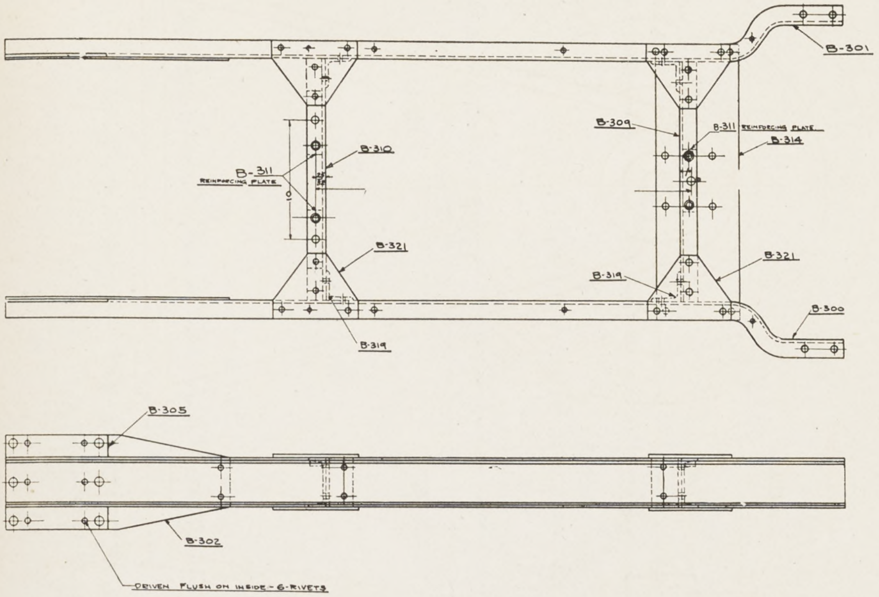
TRACK SPROCKET—LEFT HAND



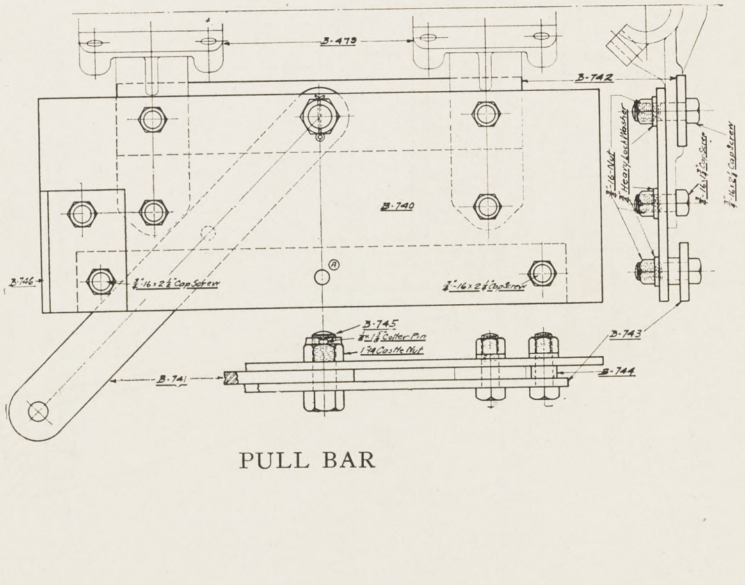
TRACK ROLLERS



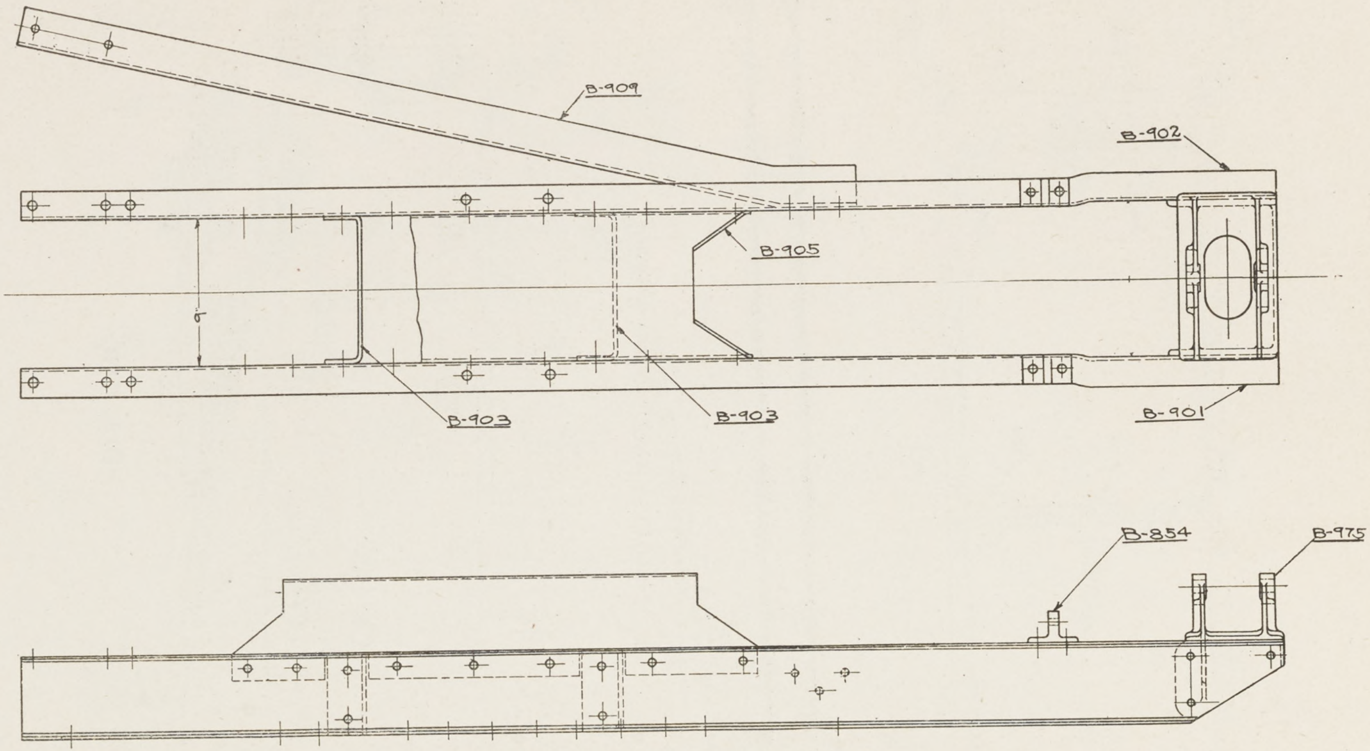
TOP TRACK CARRIER ROLLER



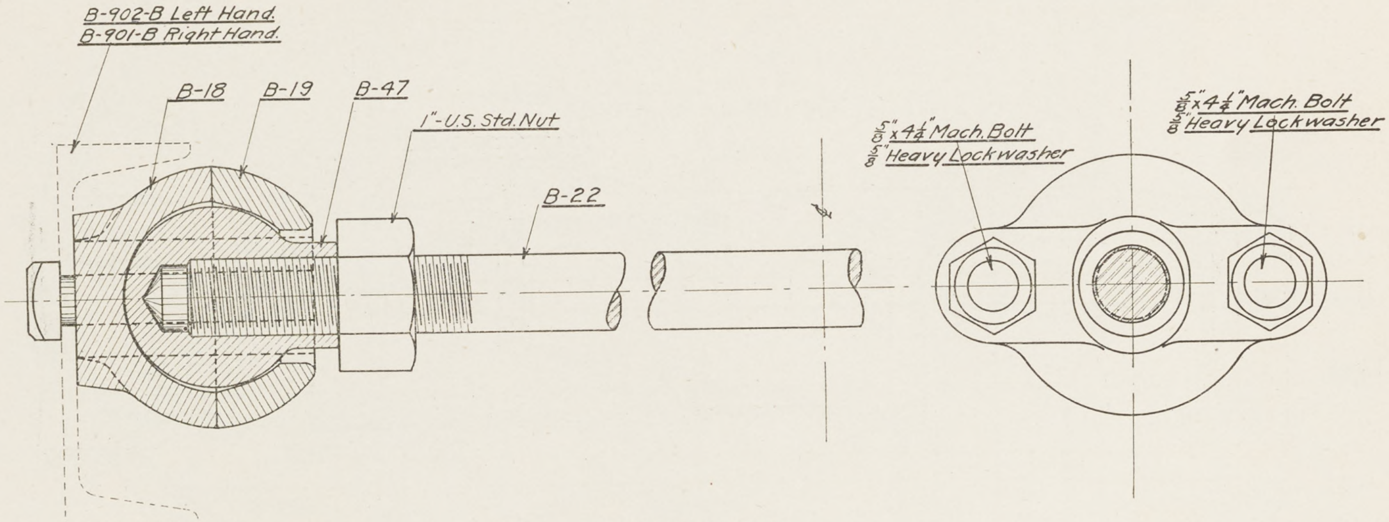
MAIN FRAME—OLD STYLE



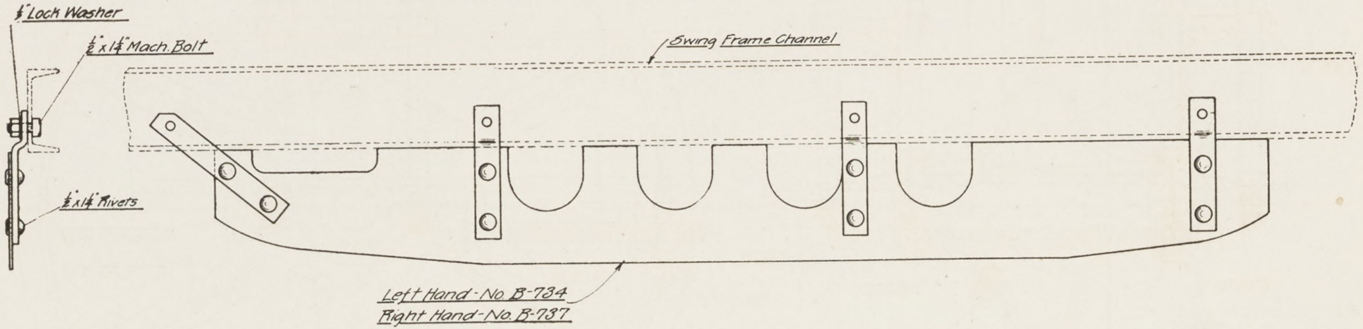
PULL BAR



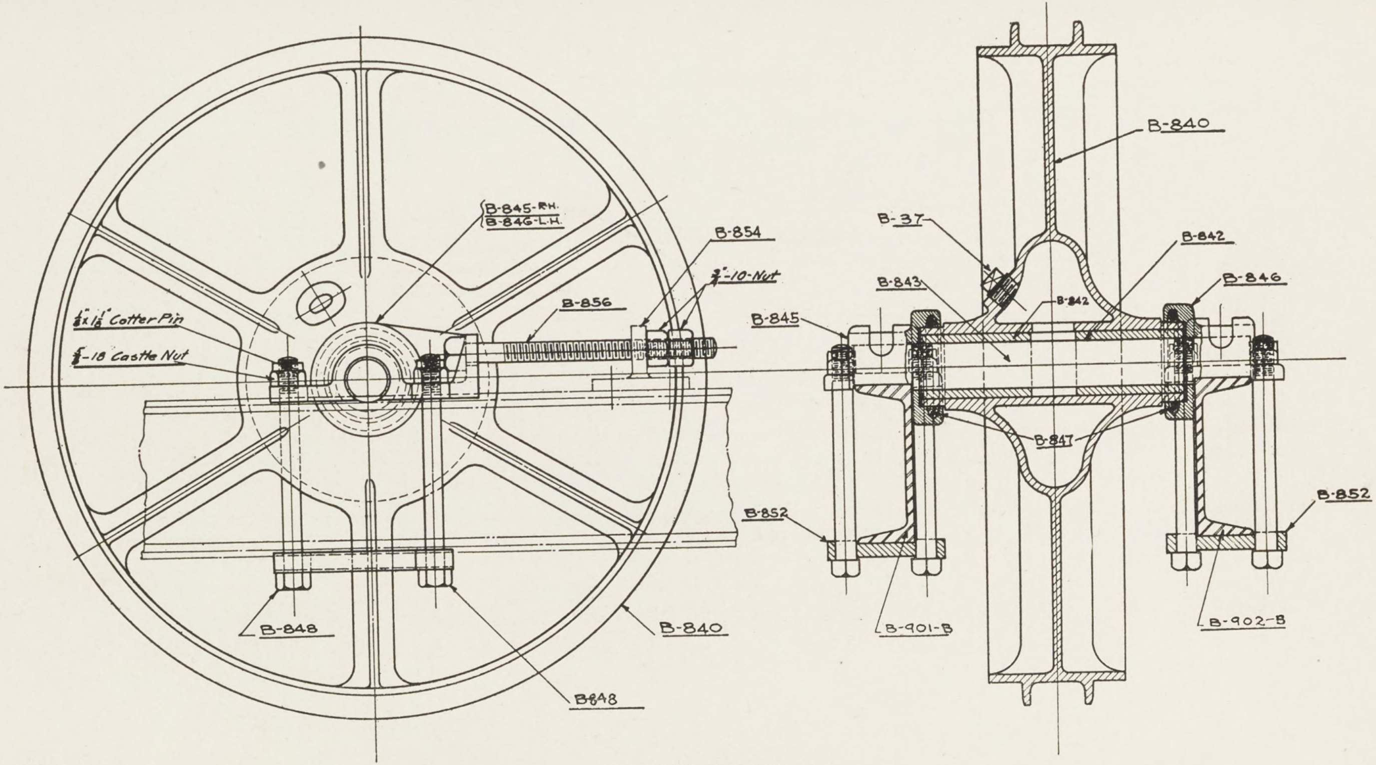
SWING FRAME—OLD STYLE


B-902-B Left Hand.
B-901-B Right Hand.
B-18
B-19
B-47
1"-U.S. Std. Nut
B-22
$\frac{5}{8}$" x 4$\frac{1}{4}$" Mach. Bolt
$\frac{5}{8}$" Heavy Lockwasher
$\frac{5}{8}$" x 4$\frac{1}{4}$" Mach. Bolt
$\frac{5}{8}$" Heavy Lockwasher

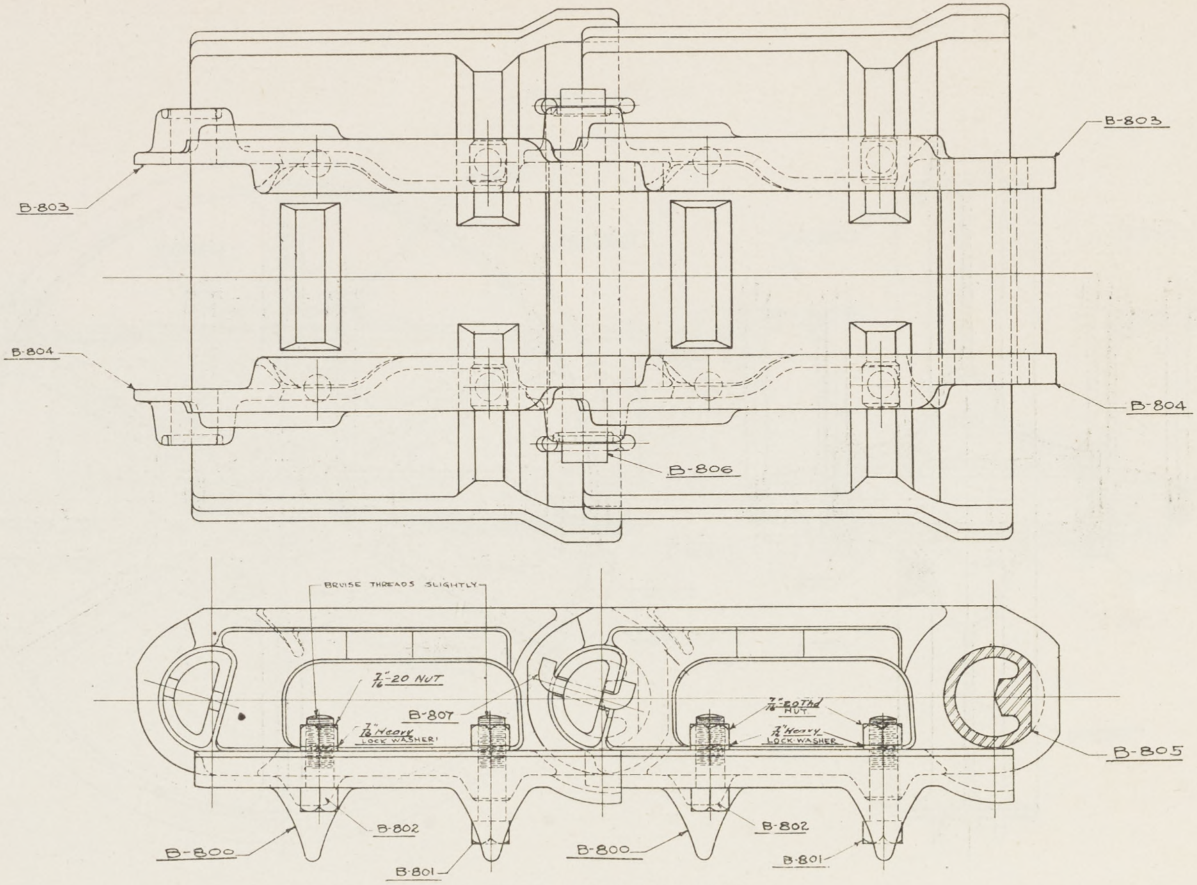
STRUT ROD



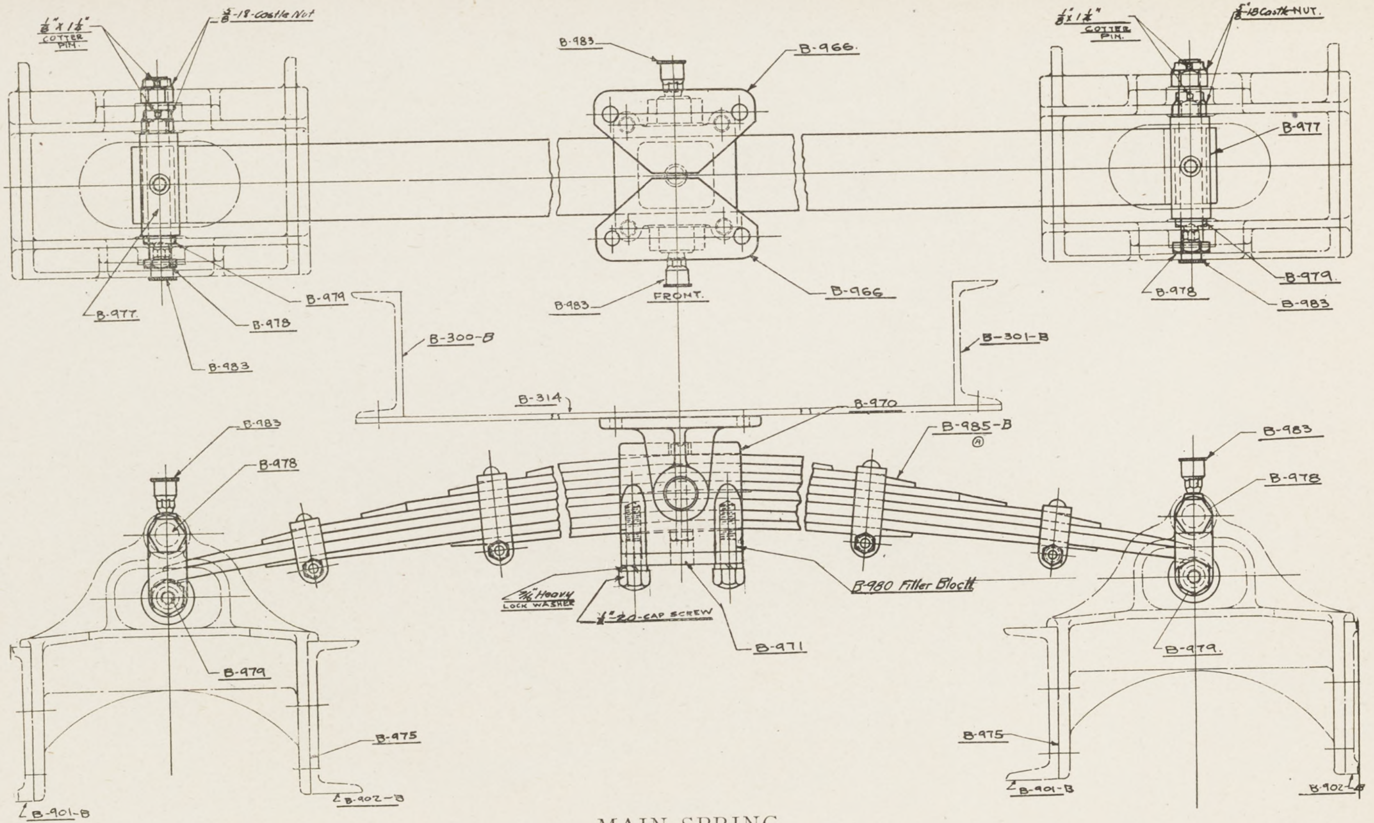
TRACK DIRT GUARD


B-845-R.H.
B-846-L.H.
⅛"x1½" Cotter Pin
⅝-18 Castle Nut
B-856
B-854
¾"-10-Nut
B-848
B-840
B848
B-37
B-843
B-845
B-852
B-840
B-842
B-842
B-846
B-847
B-852
B-901-B
B-902-B

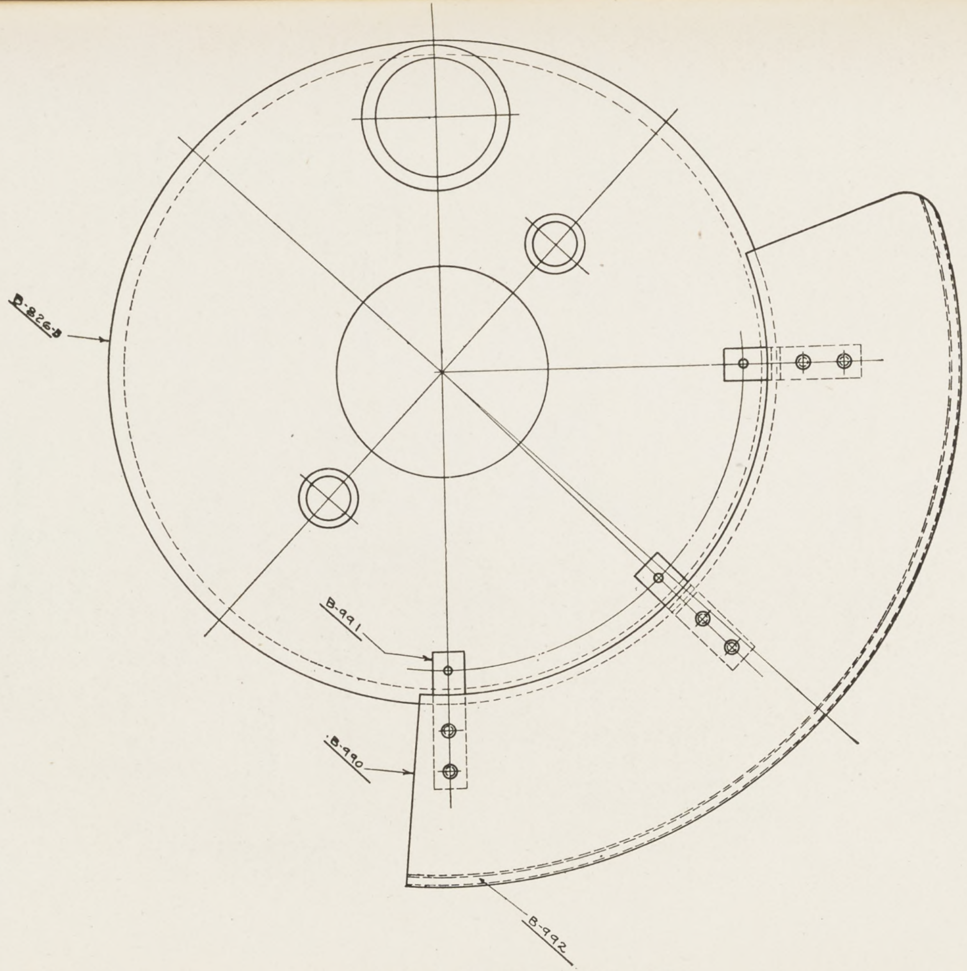
FRONT IDLER



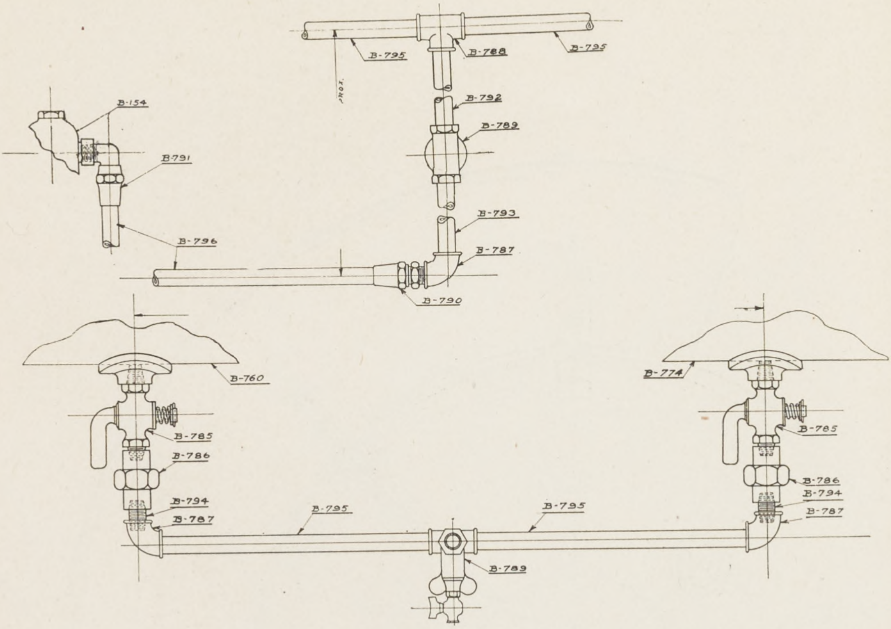
DROP FORGED TRACK


1/8" x 1 1/4" COTTER PIN.
5/8-18-Castle Nut
B-983
B-966.
1/8" x 1 1/4" COTTER PIN.
5/8"-18 Castle NUT.
B-977
B-979
B-977.
B-978
B-983
B-983
FRONT.
B-966
B-979.
B-978
B-983
B-300-B
B-301-B
B-314
B-970
B-985-B
Ⓐ
B-983
B-978
B-983
B-978
7/16" Heavy LOCK WASHER
7/16"-20-CAP SCREW
B-980 Filler Block
B-971
B-979
B-979.
B-975
B-975
B-901-B
B-902-B
B-901-B
B-902-B

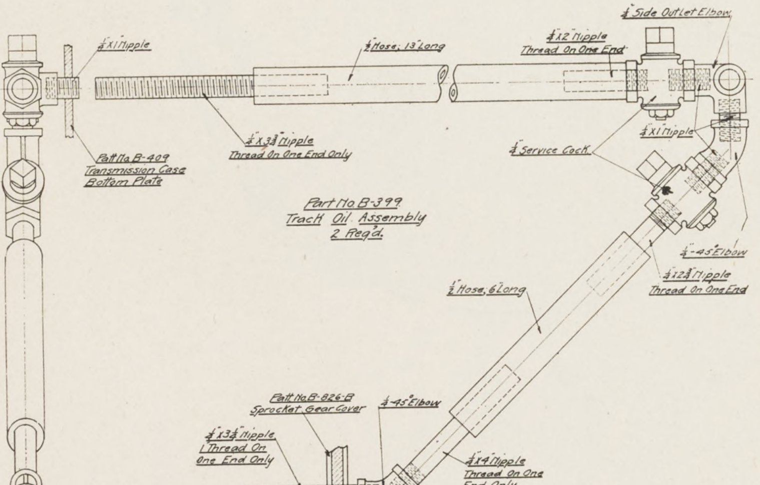
MAIN SPRING



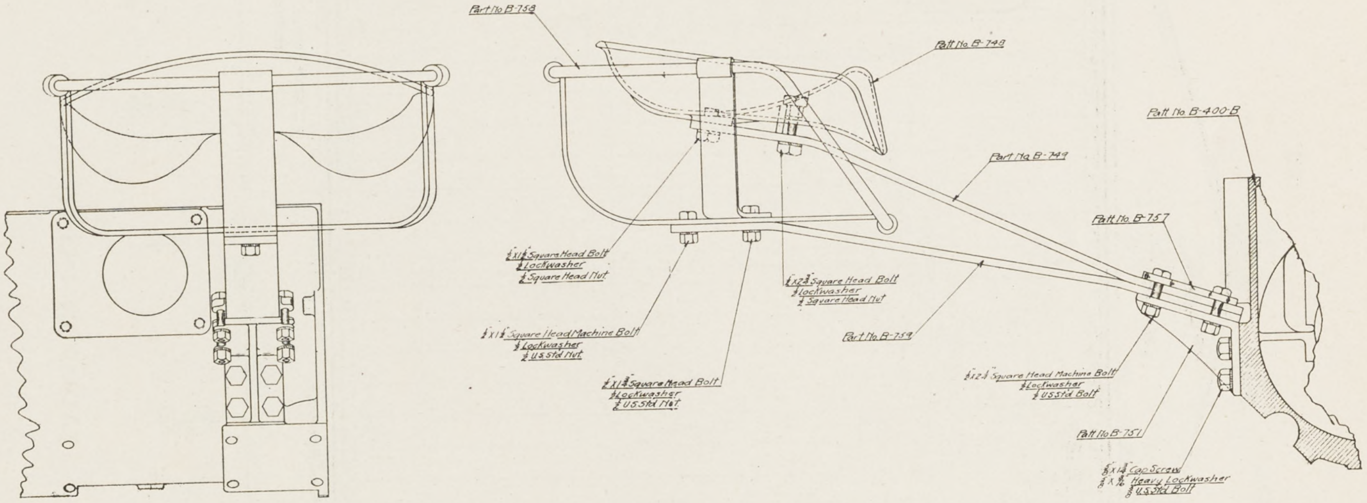
TRACK SPROCKET GUARD



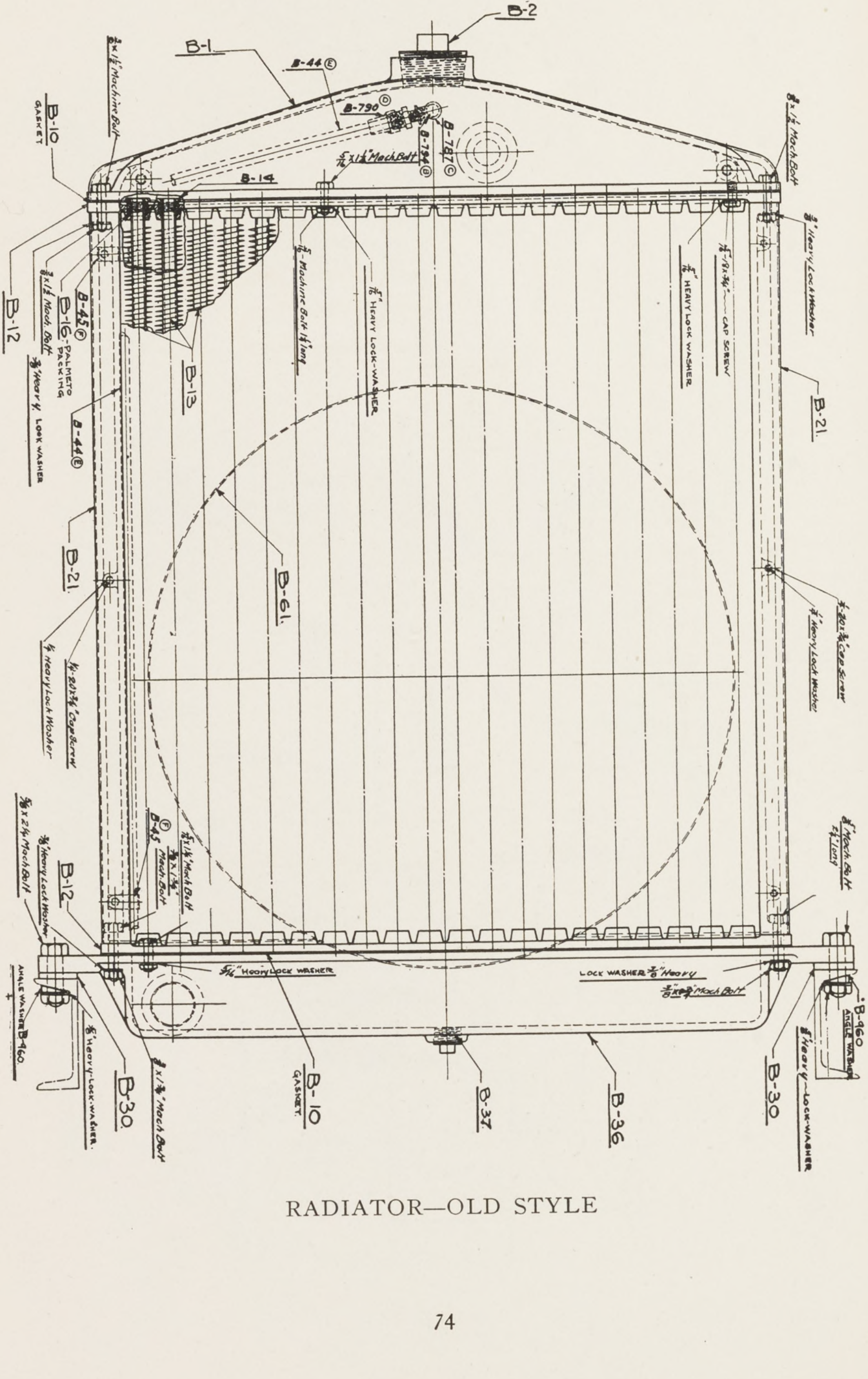
FUEL LINE ASSEMBLY


¼" Side Outlet Elbow
¼"X1"Nipple
½" Hose; 13" Long
¼"X2" Nipple Thread On One End
Patt No B-409 Transmission Case Bottom Plate
¼"X3¾" Nipple Thread On One End Only
¼"X1"Nipple
¼" Service Cock
Part No. B-399 Track Oil Assembly 2 Req'd.
¼"-45° Elbow
¼"X2¾" Nipple Thread On One End
½" Hose; 6" Long
Patt No. B-826-B Sprocket Gear Cover
¼"-45° Elbow
¼"X3¾" Nipple 1 Thread On One End Only
¼"X4" Nipple Thread On One End Only

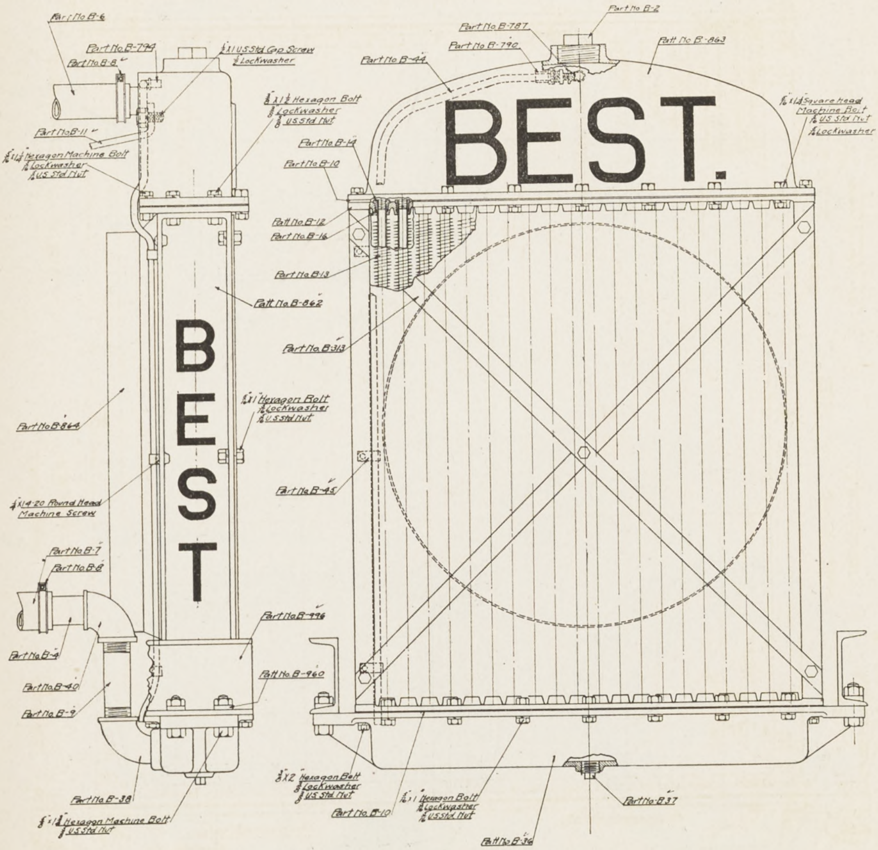
TRACK OILER ASSEMBLY



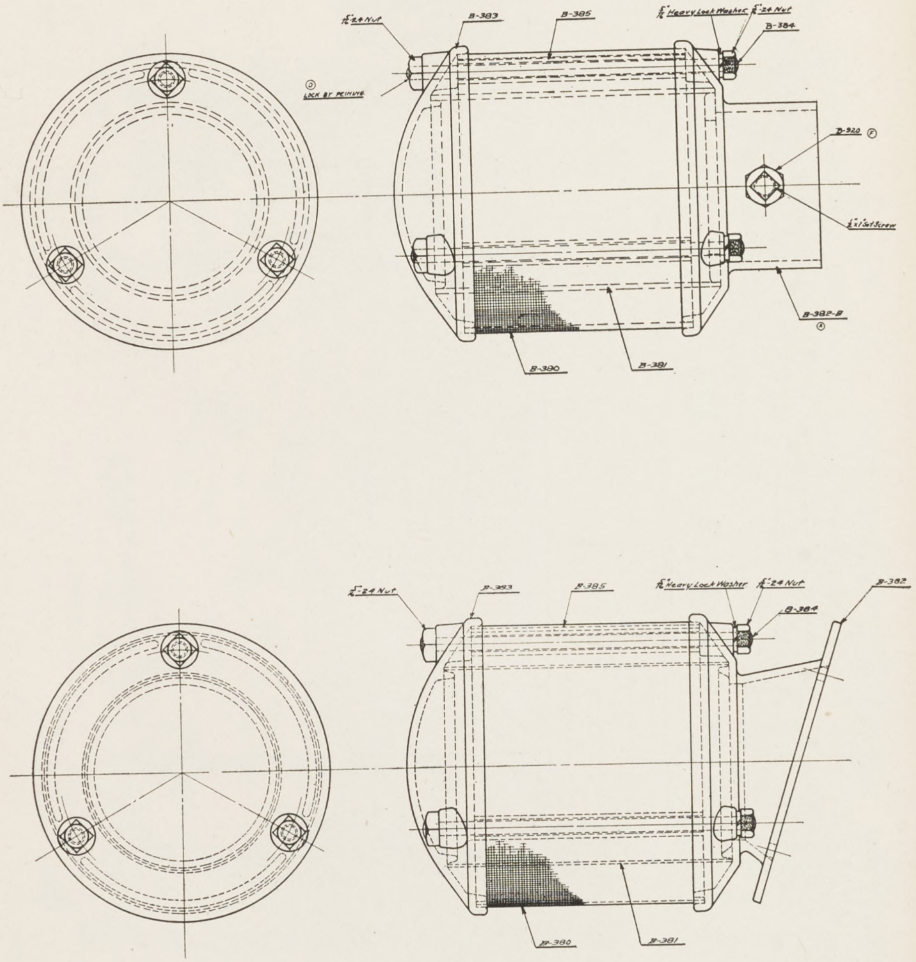
OPERATOR'S SEAT



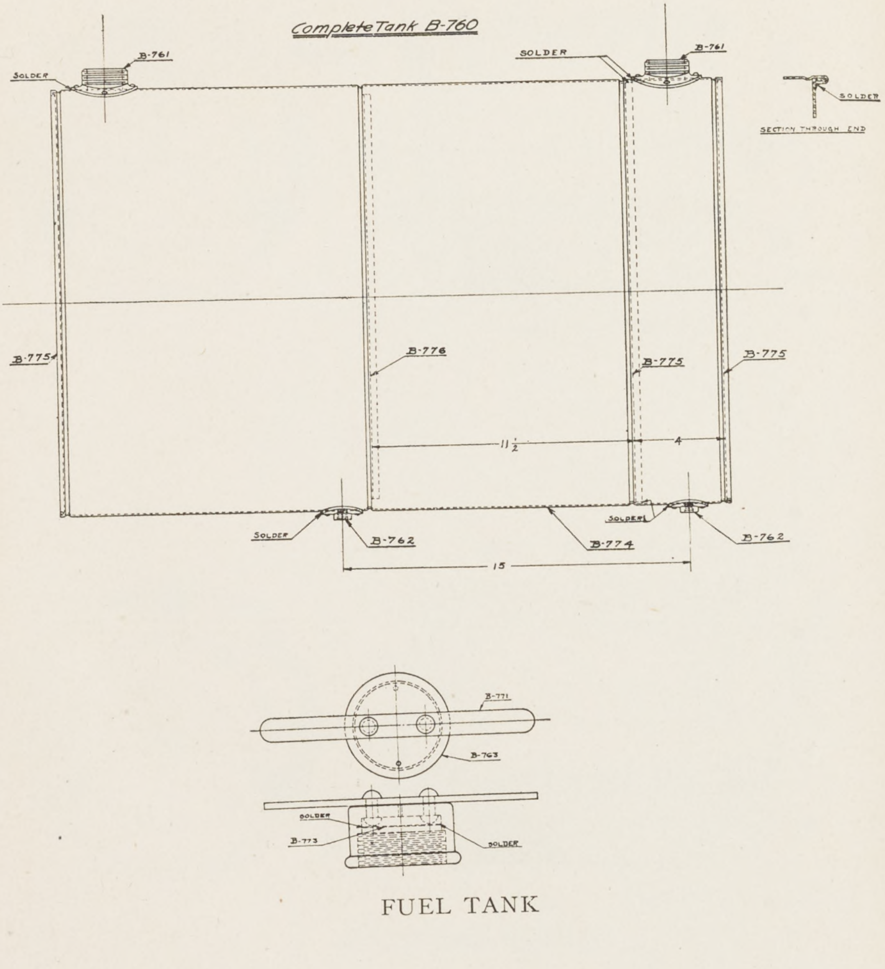
RADIATOR—OLD STYLE



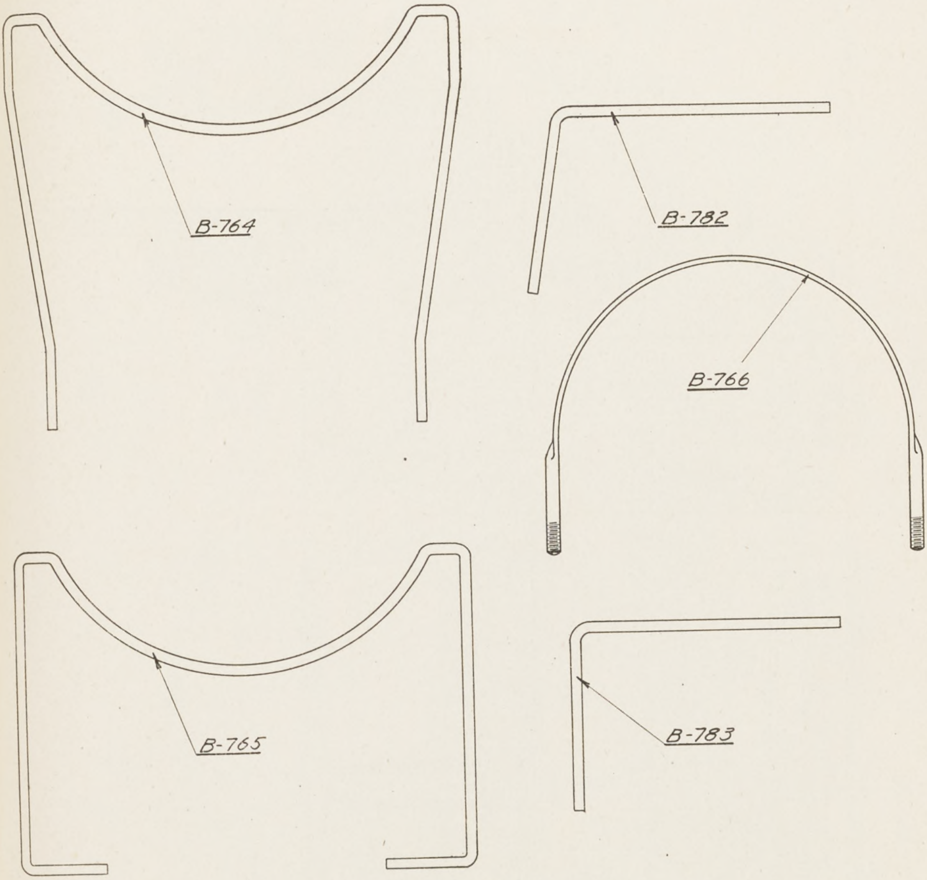
RADIATOR—NEW STYLE



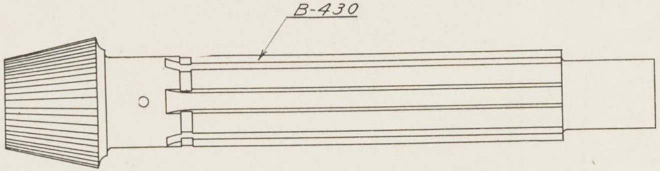
SPARK ARRESTERS


Complete Tank B-760
B-761
SOLDER
SOLDER
B-761
SOLDER
SECTION THROUGH END
B-775
B-776
B-775
B-775
11 1/2
4
SOLDER
B-762
B-774
SOLDER
B-762
15
B-771
B-763
SOLDER
B-773
SOLDER

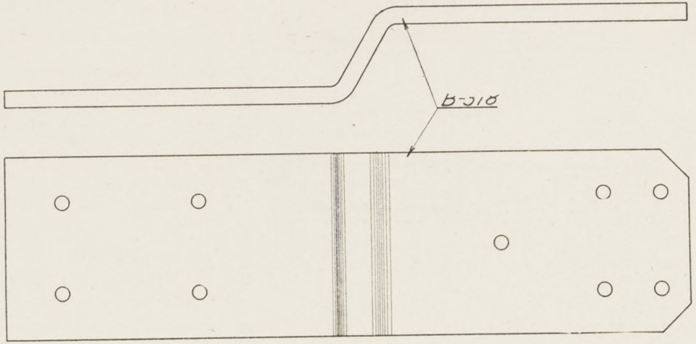
FUEL TANK

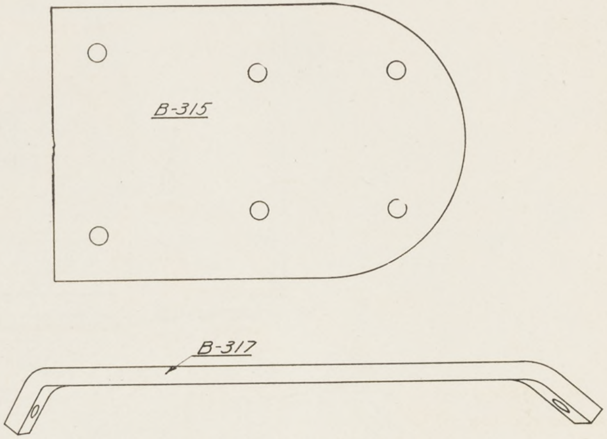


FUEL TANK SUPPORTS

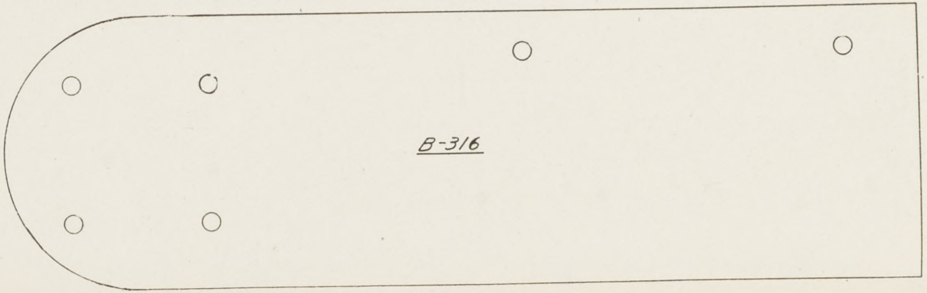


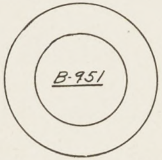
INTEGRAL PINION AND SHAFT



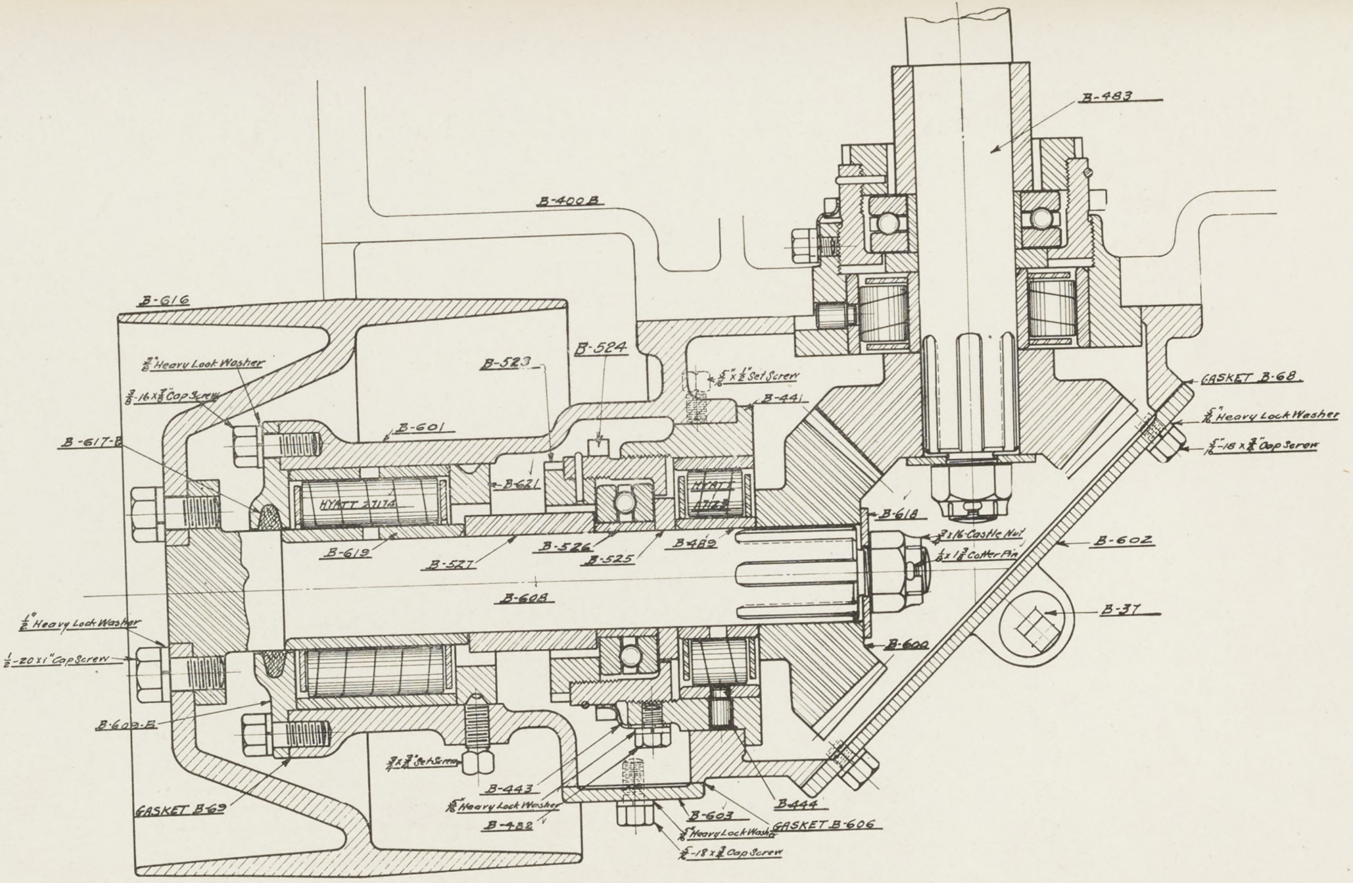


HEADLIGHT PARTS





FRONT IDLER WASHER



STATIONARY DRIVE

LIST OF PARTS

GIVE MOTOR AND TRACTOR NUMBER IN ORDERING PARTS.

Part No.		Price	NAME OF PART
B 2		Std. List	Plug, filling, for radiator, 2″ connection.
B 3		“ “	Nipple for radiator piping and pump, 1¼″x6½″.
B 4		“ “	Nipple for radiator outlet, 1¼″x4″.
B 5		.20	Hose for side water manifold, 1½″x7″.
B 6		.40	Hose for radiator inlet, 1½″x11″.
B 7		.65	Hose for radiator outlet, 1½″x18″.
B 8			Clamp, hose, for side water manifold, 1½″. Write for price.
B 9		Std. List	Nipple for radiator outlet, 1¼″x6″.
B 12		7.30	Plate for radiator tubes.
B 13		.85	Tube, with fins, for radiator, ½″ O. D.x27½″.
B 14		.10	Gland or nut for radiator tubes.
B 15			Asbestos, sheet, ⅛″x5½″x9¾″, for hot air pipe B886. Not listed separately. Write for price. Sold per lb.
B 16			Packing for radiator tubes . Write for price. Sold per lb.
B 18		1.60	Socket for strut rod, inside.
B 19		1.30	Socket for strut rod, outside.
B 20		.05	Screw, cap, for radiator casing, 5-16″x1″ SAE.
B 21		4.20	Plate, side, for radiator.
B 22		1.70	Rod, strut, for swing frame, 1″x22¾″.
B 36		8.90	Casing, bottom, for radiator.
B 37		Std. List	Plug, drain, for radiator, ¾″ connection.
B 38		“ “	Ell, street, for radiator, 1¼″ connection.
B 39		“ “	Nipple, for radiator, 1¼″x3″.
B 40		“ “	Elbow for radiator, 1¼″ connection.
B 44		.40	Pipe overflow for radiator, 5-16″ O.D.x40″.
B 45		.03	Clip, pipe, for overflow pipe on radiator, .037x½″x2¼″.
B 47		1.40	Ball, strut, for swing frame.
B 51			Screw, for governor valve lever, ¼″x13-16″. Write for price.
B 62		1.80	Brace, long, for platform, ⅜″x1¼″x10″.
B 63		1.80	Brace, short, for platform, ⅜″x1¼″x10½″.
B 64		.12	Gasket, head, for transmission case. .010x11″ D.x12⅝″ D.
B 65		.15	Gasket, for transmission case cover. .010x9¼″x11″.
B 66		.20	Gasket, for bull gear top cover. .010x14″x20″.
B 67		.12	Gasket for stationary drive housing. .010x7″x8¾″.
B 68		.12	Gasket for stationary gear cover. .010x7″x8⅝″.
B 69		.06	Gasket for stationary drive oil ring. .010x3¾″x5¼″.
B 71		.25	Ball and socket joint for governor carburetor lever. No. 14A, ⅜″ male, ¼″ female.
71A		.02	Spring for governor control quadrant. .047x½″ O.D.x 2¼″ free length.
B 78		.24	Gasket, bottom, for cylinder. .010x5¾″x5¾″.
B 79B		.20	Bolt for main bearing, ½″x5⅛″ SAE, with ½″ SAE nut.

Part No.		Price	NAME OF PART
B 80B		.20	Bolt for main bearing, ½"x4⅝" SAE, with ½" SAE nut.
B 82		.15	Cap, for rear bearing oil pocket.
B 83B		3.45	Cradle for timing gear end—BABBITTED.
B 84B		3.40	Cap for timing gear end bearing—BABBITTED.
B 85		.01	Shim for timing gear end bearing, .006 thick.
B 85		.01	Shim for timing gear end bearing, 1-16" thick.
B 85		.01	Shim for timing gear end bearing, .012 thick.
B 86B		3.05	Cradle (ribbed) for center bearing—BABBITTED.
B 87B		3.10	Cap for center bearing—BABBITTED.
B 88		.01	Shim for center bearing, .006 thick.
B 88		.01	Shim for center bearing, .012 thick.
B 88		.01	Shim for center bearing, 1-16" thick.
B 89B		4.15	Cradle for flywheel end bearing—BABBITTED.
B 90B		4.75	Cap for flywheel end bearing—BABBITTED.
B 91B		.01	Shim for flywheel end bearing, .006 thick.
B 91B		.01	Shim for flywheel end bearing, .012 thick.
B 91B		.01	Shim for flywheel end bearing, 1-16" thick.
B 94		.15	Gasket for intake and exhaust manifold.
B 95		.10	Stud for intake and exhaust manifold. ⅝"x4¾" long.
B 96		1.50	Flange, adapter, for carburetor.
B 97		15.70	Shaft, lower, for transmission, 2" D.x17".
B 98		.25	Clamp for intake and exhaust manifold.
B 99		1.10	Collar for thrust bearing retainer, 2½" D.x1.218" long.
B 100B		77.75	Crank case.
B 102B			Housing for timing gear. Superseded by B593.
B 103		.15	Gasket for timing gear housing, .010x10 1-16"x11".
B 104		.05	Stud for timing gear housing, ⅜"x3⅞".
B 105		31.05	Sleeve, bevel gear, 3¼" largest dia. x17".
B 106		2.85	Nut for bevel gear sleeve, 4¼" D. x11".
B 107		.05	Stud for timing gear housing, ⅜"x2½".
B 108B		.12	Gasket for crank case side cover, .010x7⅝"x12".
B 109B		2.00	Cover, side, for crank case.
B 110		.05	Pin for timing gear housing, ⅜"x3 5-16".
B 111		.04	Pin or timing gear housing, ⅜"x3".
B 112B		2.40	Cover, inspection, for crank case.
B 113B		.55	Wheel, hand, for inspection cover.
B 114B		.65	Bar, clamp, for inspection cover.
B 115		.10	Stud, for inspection cover hand wheel, ⅝"x4⅜".
B 116B		.12	Gasket, for crank case inspection cover, .010x10¼"x12".
B 117		.15	Gasket for timing gear cover, .010x15¾"x16 5-16".
B 118B		2.80	Cover for flywheel end of motor.
B 119B		.12	Gasket for flywheel end of crank case, .010x6⅞"x12⅝".
B 120		.16	Gasket, felt, flywheel end, for motor cover, 3-16"x½"x 15 1-16".
B 121		19.00	Shaft, upper, with B135 collar, for transmission, 1⅝" D. x37¼".
B 122		7.55	Body for water pump, with B138 bushing.
B 123		4.95	Cover, with B138 bushing, for water pump.

Part No.		Price	NAME OF PART
B 124		.75	Gland for water pump.
B 125		.05	Stud for water pump, ⅜"x2⅛".
B 127		.40	Runner for water pump.
B 130		2.00	Shaft for water pump, 1 1-16"x15¼".
B 132		1.50	Coupling for water pump shaft and governor.
B 133		Std. List	Nipple for side water manifold, 1¼"x2½".
B 134		" "	Nipple for water pump intake, 1¼"x3".
B 135			Collar, used with B121 upper transmission shaft, 2½" D. x2". Not sold separate from shaft.
B 138		1.10	Bushing for water pump, used with B122-123 body and cover, 1¾" long x1" I.D. x1⅜", with ⅛" pipe tap.
B 142		.05	Pin, dowel, for inspection cover, ⅜"x⅞".
B 143			Cock, drain, for side water manifold, ⅛" connection. Write for price.
B 144		.15	Bolt for clutch release ring, ⅜"x2½".
B 146		.30	Packing for water pump.
B 147		.12	Gasket for water pump, 7 7-16"x6"x.010.
B 148		2.70	Bracket for magneto.
B 149			Magneto with starter and coupling. Write for price.
B 150		64.50	Shaft, crank.
B 151B		4.20	Gear, timing, used on crank shaft, 4½" O.D. x2" I.D. x 1⅝" face, 8 pitch, 34 teeth.
B 153		.15	Bolt, flywheel to crank shaft, ⅝"x2", special.
B 154			Carburetor. Write for price.
B 155B		5.90	Shaft, cam, 1"x34⅞". Unassembled.
B 156B		9.10	Gear, used on cam shaft, 8¾" O.D. x 15-16" dia. bore, x 5 1-16" length through bore, 8 pitch, 68 teeth, 8½" pitch dia.
B 158		1.75	Cam, intake.
B 159		1.75	Cam, exhaust.
B 160		.50	Lever for priming cups, ⅛"x½"x25⅜".
B 161		6.55	Bearing (bronze), used on front of cam shaft.
B 162B		2.25	Bearing, used on center of cam shaft.
B 163B		1.95	Bearing, used on flywheel end of cam shaft.
B 164		4.00	Gear, spiral, used on cam shaft, 2.008" O. D. x1" I.D. x 1½" length through bore, 1.76" pitch dia., 8 normal pitch, 10 teeth.
B 165		.05	Gasket for carburetor adapter flange, 1-16"x2 3-16"x3½".
B 170		9.90	Connecting rod, complete with B171, B172, B173, B174; nuts, etc.
B 171		Std. List	Screw, cap, used on connecting rod, ¾"x1¾". Write for price.
B 172		.01	Shim for connecting rod, .006 thick.
B 172		.01	Shim for connecting rod, .012 thick.
B 172		.01	Shim for connecting rod, 1-16" thick.
B 173		.90	Bolt, used on connecting rod, with nuts, 1"x3⅜", special.
B 174		1.15	Bearing for connecting rod, 2 required for each rod.
B 185B		34.50	Flywheel.

Part No.		Price	NAME OF PART
B 189	....	.01	Spacer for clutch driving pin, ¾"x½".
B 190	....	.75	Pin, clutch driving, ¾"x4⅝".
B 192	....	.35	Bar for starting motor, ¾"x15".
B 193	....	11.35	Hub for main clutch.
B 194	....	2.25	Disc, for flywheel clutch, 3-16"x4 1-16"x10 1-32".
B 195B	....	12.25	Plate, driving, for main clutch, with B198 bushing.
B 196	....	.15	Link, driving, for clutch, ¼"x1½"x4".
B 197	....	.02	Washer for clutch driving pin, 1-16"x25-32"x1¼".
B 198	....	3.50	Bushing for main clutch drive plate, 4.002" O.D. x3.506" I.D. x1" long, special.
B 199	....	3.00	Plate, take-up, for main clutch.
B 200	....	4.15	Collar, adjusting, for main clutch.
B 201	....	.01	Washer, retaining, for main clutch, 3-16"x21-32"x1⅞".
B 204	....	.15	Pin, link, for flywheel clutch, ½"x1¼".
B 205	....	.15	Pin, dog, for flywheel clutch, ½"x1⅝".
B 207	....	.25	Dog, for flywheel clutch, 3-16"x1⅛"x2½".
B 208	....	.25	Link, for flywheel clutch, 3-16"x⅞"x2⅛".
B 209	....	4.40	Collar, release, for main clutch.
B 210	....	3.35	Ring, release, for main clutch (2 pcs. with 2 ⅜"x2½" bolts).
B 212	....	.01	Pipe, spacer, for clutch driving link, ¾"x⅝".
B 213	....	.20	Pin, driving, for flywheel clutch, ¾"x2 7-16".
B 214	....	.70	Disc, for flywheel cluch brake, 4¾"x2¾"x½".
B 215B	....	14.00	Cylinder—only.
B 215B	....	14.50	Cylinder complete with B220 and B233 studs.
B 218	....	3.70	Manifold, side water.
B 219	....	.08	Gasket for side water manifold, 2⅝"x1⅝"x½".
B 220	....	.05	Stud for side water manifold, used with B215B, ⅜"x 2 5-16".
B 221B	....	4.20	Manifold, top water.
B 222	....	.05	Stud, for top water manifold, used with B-230B. ⅜"x 1 5-16".
B 223	....	.25	Indicator for inspection cover clamp bar.
B 224	....	.08	Gasket for top water manifold, 1-16"x2⅞" long.
B 225	....	5.60	Piston—only.
B 225	....	8.65	Piston, complete with B-226 rings and B-227 pin.
B 226	....	.35	Ring for piston B-225.
B 227	....	2.10	Pin for piston B-225; 1 5-16"x4⅛".
B 229B	....	.15	Trough, for connecting rod.
B 230B	....	8.30	Head for cylinder—only.
B 230B	....	9.80	Head for cylinder complete with 2 B-241 bushings.
B 230B	....	16.05	Head for cylinder complete with B-241, B-95, B-234, B-235, B-222, B-244, B-243, B-240, B-242.
B 231	....	.50	Gasket for cylinder head, 3-32"x6 13-16"-D.
B 232	....	1.70	Cover for cylinder head.
B 233	....	.10	Stud for cylinder, ⅝"x6⅛".
B 234	....	Std. List	Plug, pipe, for cylinder, ⅛" connection.

Part No.		Price	NAME OF PART
B 235	....	.55	Cup, priming, with lever handle and cap, for B-230B cylinder head. Size No. 0—1/8".
B 236B	....	.05	Stud for cylinder, 5/8"x2 3/8".
B 237	....	.35	Cup, oil, for the motor and rocker arm. Size No. 00—1/8".
B 238	....	Std. List	Screw for cam shaft bearing, 3/4" hex. x1 9-16".
B 240	....	2.00	Valve, for B-230B cylinder head, 2 3-16".
B 241	....	.75	Bushing for valve stem in cylinder head B-230B.
B 242	....	.20	Washer for valve (split) 5/8"x1/4". Price per whole washer.
B 243	....	.40	Washer for valve spring (solid), 2"x11-16".
B 244	....	.15	Spring for valve, 2" O.D. x2 1/4" compressed.
B 245	....	.35	Spacer for rocker arm, 1 3/8"x15-16".
B 246	....	1.50	Rocker arm.
B 247	....	1.30	Stand for rocker arm.
B 248	....	2.00	Shaft for rocker arm stand, 1 5-16"x5 13-16". Special stock.
B 249	....	.05	Stud for rocker arm stand, 3/8"x4 1-16".
B 250	....	.05	Stud for rocker arm stand, 3/8"x4 7/8".
B 251	....	1.80	Tappet, 1 3/4"x4 3/8".
B 252	....	1.20	Guide for tappet.
B 253	....	.50	Clamp for tappet guide.
B 254	....	.05	Stud for tappet guide clamp, 3/8"x1 15-16".
B 255	....	.45	Cap or petticoat, dust, for tappet.
B 256	....	.02	Plug for oil pump shaft bearing, 1" Welsh.
B 257	....	.45	Push rod, 3/8"x13 7/8".
B 258	....	.40	Nut, adjusting, for push rod, 9-16" hex. x1 1/4".
B 259	....	.05	Gasket for tappet guide, .010x1 29-32"x2 3/8".
B 260	....	.05	Stud for flywheel clutch hub plate, 5/8"x2 1/2".
B 261	....	6.80	Fan (aluminum).
B 262	....	.75	Collar for fan spring, 2 1/4"x11-16".
B 263	....	1.75	Plate, sliding, for fan friction.
B 264	....	4.65	Fan shaft, 1 1/4"x10 7/8".
B 265	....	1.90	Retainer for fan bearing.
B 266	....	.65	Spring for fan, 1 13-16" I.D. x2 1/2" free height.
B 267	....	1.75	Plate for fan friction.
B 269	....	.02	Shim for fan bearing retainer.
B 270	....	.05	Washer, felt, for fan bearing retainer, 1/4"x1 1/8" I.D. x 1 5/8" O.D.
B 271	....	3.65	Gear for fan shaft, 3 3/8" O.D. x1 2188" dia. of bore, 8 pitch, 1 5/8" face, 25 teeth.
B 272	....	.30	Disc, friction, for fan, 4"x15-32"x5-32".
B 273	....	1.85	Cap for fan bearing.
B 277	....	4.60	Bearing for fan shaft.
B 278	....	.03	Gasket for fan shaft bearing cap, 5 1/8"x3 11-16"x.010.
B 281	....	.05	Pipe for oil pump inlet, 3/4"x1 9-16".
B 283	....	.85	Strainer for oil pump, complete with body and screen.
B 284	....	1.25	Bushing for oil pump shaft, 1 3/8" O.D. x7/8" I.D. x2 17-32" long.

Part No.		Price	NAME OF PART
B 285	....	2.90	Oil pump, upper half.
B 286	....	4.40	Oil pump, lower half.
B 287	....	2.30	Gear, driving, for oil pump, 1.994″ O.D. x⅞″ bore, ⅞″ face, 8 pitch, 1¾″ pitch dia., 14 teeth.
B 288	....	1.90	Gear, driving, for oil pump, 2″ O.D. x⅞″ face x⅞″ bore, 8 pitch, 1¾″ pitch dia., 14 teeth.
B 289	....	.55	Shaft for oil pump drive gear, ⅞″x4⅜″.
B 290	....	.40	Shaft for oil pump driven gear, ⅞″x3 3-16″.
B 291	....	1.05	Shaft for oil pump, ⅞″x16¾″.
B 292	....	4.00	Gear for oil pump shaft spiral, 2.008″ O.D. x⅞″ I.D. x 1 11-16″ length through bore, 8 normal pitch, 1.76″ pitch dia., 10 teeth.
B 293	....	.90	Conduit, ignition, ⅞″ O.D. x¾″ I.D. x24″ long.
B 294	....	.01	Pin, dowel, for oil pump, ¼″x1 11-16″.
B 295	....	....	Screw for ignition conduit, 5-16″x½″ fillester head. Write for price.
B 296	....	.05	Clip for ignition conduit, 1-16″x¾″x4½″.
B 298	....	.10	Gasket for oil pump body, .010x5½″x6⅛″.
B 299	....	Std. List	Screw for center cam shaft bearing, ½″x1⅛″ headless set screw.
B 313	....	.40	Brace, front, for radiator, ⅛″x1″x35⅛″ long.
B 315	....	.90	Bracket for front headlight, 5-16″x6″x9″.
B 316	....	1.45	Bracket for rear headlight, 5-16″x6″x20″.
B 317	....	.80	Brace for rear headlight bracket, ⅜″x1½″x14¼″.
B 318	....	1.45	Bracket for generator, ⅜″x4″x15⅞″.
B 323	....	1.45	Lever for main clutch.
B 324	....	.90	Rod for main clutch, ⅝″x25⅞″.
B 325	....	.70	Knuckle for main clutch rod.
B 326	....	.07	Pin, clevis, for main clutch rod, ⅝″x2⅛″.
B 327	....	6.25	Guard, mud, for lower track, L.H. inside and R.H. outside, 3-16″x7″x5′ 3″.
B 328	....	6.25	Guard, mud, for lower track, R.H. inside and L. H. outside, 3-16″x7″x5′ 3″.
B 329	....	.15	Stud, lever, for main clutch, 1″x2⅝″.
B 330	....	.01	Washer, lever, for main clutch, .125x29-32″x1¼″.
B 331	....	5.95	Steering cross bar.
B 332	....	1.70	Steering push pin, ⅞″ hex. x7⅜″ long.
B 333	....	.75	Roller, release, for side clutch, 2¼″ D. x1¼″.
B 334	....	....	Bolt, mounting, for motor, ⅝″x2″ mch. Write for price.
B 335	....	....	Bolt, mounting, for motor, ⅝″x1¾″ mch. Write for price.
B 336	....	Std. List	Screw, cap, to be used on main frame to transmission case, ⅝″x1½″. Write for price.
B 337	....	.30	Pin, release roller, for side clutch, ¾″x2⅜″.
B 340	....	2.35	Fork for main clutch.
B 341	....	3.10	Bracket, fork, for main clutch.
B 343	....	1.50	Pin, fork, for main clutch, ⅞″x5 5-16″.
B 345	....	....	Ignition switch, "Sumter." Write for price.

Part No.		Price	NAME OF PART
B 346			Wire, ignition, for switch, ¼"—No. 18, 54" long. Write for price.
B 348		.35	Bracket for ignition switch.
B 360			Cleaner, air, 1¼" Wilcox-Bennett. Write for price.
B 374		2.20	Bracket, mounting, for motor.
B 375		2.20	Bracket, mounting, for motor.
B 376			Cable, ignition, used on cylinder; 45½" long. Write for price.
B 377			Cable, ignition, used on cylinder; 29" long. Write for price.
B 378			Cable, ignition, used on cylinder; 22" long. Write for price.
378C		1.60	Base for headlight.
B 379			Cable, ignition, used on cylinder; 14" long. Write for price.
B 380		.50	Screen for spark arrester, No. 8M, 5 5-16"x21 3-16".
B 381		.50	Screen for spark arrester, No. 8M, 6⅝"x15 9-16".
B 382B		1.70	Base for spark arrester.
B 383		1.10	Top for spark arrester.
B 384		.55	Bolt for spark arrester, 5-16"x7⅝".
B 385		.10	Sleeve for spark arrester, ¼"x5 5-16".
B 386		Std. List	Screw for spark arrester, ½"x1" set. Write for price.
B 400B		113.15	Transmission case with head and caps.
B 401		12.45	Head for transmission case.
B 402		.02	Pin, dowel, for transmission case head, ⅜"x1".
B 405		4.40	Cover for transmission case.
B 406		.06	Gasket for transmission case oil hole cover, 4½" O.D. x 3¼" I.D. x .010.
B 407		.55	Cover for transmission case oil hole.
B 409		1.10	Plate, bottom, for transmission case.
B 410B		22.90	Plate for bull pinion bearing, R.H.
B 411B		22.90	Plate for bull pinion bearing, L.H.
B 412B		10.75	Cover, top, transmission bull gear.
B 413		.16	Gasket for cannon, .010x12¾" I.D.x15¾" O.D.
B 416		.20	Washer, felt, for bull pinion bearing plate, ¼"x2 5-16"x 3⅛".
B 418		.07	Gasket for transmission case bottom plate, .010x5½"x 4½".
B 419		3.60	Retainer for bevel gear bearing.
B 420		2.65	Nut, lock, for bevel gear retainer.
B 421		.05	Clip, bearing adjustment, 1-16"x⅝"x2".
B 422		.02	Key for bevel gear bearing retainer, ¼"x¼"x1⅜".
B 423		10.35	Bearing for bevel gear, "Timken" 552/559.
B 424		.60	Sleeve for bevel gear bearing, 2½"x1¼".
B 425			Cap for bearing plate axle. NOTE: This part sold with cannon; not sold separately.
B 427		10.00	Pinion, bevel, for main drive, 3.784" O.D., 1.25" bore, 2⅛" face, 17 teeth.

Part No.		Price	NAME OF PART
B 428	....	.05	Key for bevel pinion, 5-16″x5-16″x2″.
B 429	....	33.80	Bevel gear, 12.240″ O.D., 2.700″ spline, 2⅛″ face, 61 teeth.
B 430	....	15.70	Pinion, bevel, with shaft integral, 2.990″ O.D., 2″ face, 14 7-32″ length over all, 13 teeth.
B 431	....	33.80	Bevel gear, O.S., used on all tractors up to No. B19 inclusive. Size: 12.236″ O.D.x2.7″ spline, 2″ face, 61 teeth.
B 432	....	21.70	Gears, lower, used in transmission, 6¾″ O.D.x1.7″ bore, 6-8 pitch, 39 teeth. 5.583″ O.D.x1.7″ bore, 32 teeth, 6-8 pitch. Length through bore 3⅛″.
B 434	....	7.50	Gear, high speed, used in transmission, 5″ O.D., 1.350″ spline, ⅞″ face, 29 teeth.
B 435	....	8.00	Gear, low speed, used in transmission, 3.916″ O.D., 1.350″ spline, 1⅛″ face, 22 teeth.
B 436	....	4.90	Gear, reverse, top, used in transmission, 3¼″ O.D., 1½″ bore, 6-8 pitch, 1⅛″ face, 18 teeth, 1¾″ length through bore.
B 437	....	5.80	Gear, reverse idler, used in transmission, 2¼″ O.D., 1¾″ spline, 1⅛″ face, 18 teeth.
B 438	....	7.25	Pinion, main drive or bull, 3.650″ O.D., 2″ spline, 4-5 pitch, 13 teeth, 2½″ length through bore.
B 441	....	5.50	Retainer, forward bearing, for lower transmission shaft.
B 442	....	.55	Ring, retaining, bevel pinion, 2¼″x¼″.
B 443	....	.05	Retainer, adjustment, for thrust bearing, 1-16″x⅞″x1½″.
B 444	....	.01	Pin for "Hyatt" outer race retainer, ⅜″x⅝″.
B 445	....	.05	Washer for bevel pinion, 3-16″x13-16″x1⅝″.
B 447	....	7.02	Bearing, rear, for lower transmission shaft, "Hyatt" No. 27131.
B 449	....	1.05	Disc, friction, for steering clutch, ⅛″x6⅞″ I.D. x11⅛″ O.D. Special composition.
B 450	....	2.60	Disc, outside, for steering clutch, .099x6⅞″x11¾″.
B 451	....	2.20	Disc, inside, for steering clutch, 3-32″x6¼″x11⅛″.
B 452	....	18.00	Drum for outside clutch.
B 453	....	17.50	Drum for inside clutch.
B 457	....	2.75	Retainer for thrust bearing.
B 460	....	8.00	Bearing for steering clutch ball thrust, "Bantam" "Lavish," 3½″ shaft dia. x5 7-32″ O.D. x1″ thick.
B 461	....	4.95	Collar, shifter, for steering clutch, with 8 B-466 pins.
B 462	....	4.70	Collar, shifter, for side clutch.
B 464	....	3.30	Fork, shifter, for side clutch.
B 465	....	....	Screw for shifter arm, 1¼″ hex. x3¾″ long. Write for price.
B 466	....	....	Pin, for shifter collar B-461, ½″x1¼″. Not sold separately from B-461.
B 469	....	....	Washer, for bearing retainer, .175x2″x.010x3.751″.
B 470	....	26.10	Shaft for main drive pinion, 2½″x19⅜″.
B 471	....	11.58	Bearing for main drive, "Hyatt" No. 27181.

Part No.		Price	NAME OF PART
B 472			Nut for main drive pinion, 1¾"x⅝" slotted. Write for price.
B 473		.05	Washer for main drive pinion, .125x1 1-32"x3-16".
B 474		1.25	Spacer for main drive pinion.
B 475		.05	Screw, holding, for "Hyatt" bearing outer race, used in transmission. Size, ⅜"x½".
B 476		1.21	Bearing for reverse idler, "Hyatt" No. 27925.
B 477		.10	Spacer for main drive pinion shaft, ¼"x1 23-32".
B 478		.05	Screw, holding, for "Hyatt" bearing inner race, used in transmission. Size, 5-16"x⅜".
B 479			Cap, axle, bearing, used with transmission case B-400B. Not sold separate from case.
B 480		.01	Pin, dowel, for main drive pinion cover, ⅜"x¾"
B 481		.05	Stud for main drive pinion bearing plate, ½"x1⅞".
B 482		Std. List	Screw, cap, for thrust bearing adj. retainer, 5-16"x⅜" cap. Write for price.
B 485		.95	Spacer, for upper transmission shaft, 1½"x1⅞".
B 487		.05	Retainer or washer for upper transmission shaft bearing, 3-32"x1½"x2½".
B 488		.05	Retainer or washer for lower transmission shaft bearing, 1-16"x2"x3½".
B 489		5.05	Bearing for upper transmission shaft, "Hyatt" No. 27123.
B 490		3.90	Ring for transmission case felt retainer.
B 491		.06	Gasket for transmission felt retainer ring, 5" D. x3¾" D. x .010.
B 493		.70	Spacer for upper transmission shaft clutch.
B 494		.15	Gasket for main drive pinion bearing hub, ⅛"x3¾"x4¾" felt.
B 495		.40	Washer for sprocket gear cover oil retainer, outer, 5-16"x⅜"x66¾" felt.
B 496		.11	Washer for sprocket gear cover oil retainer, outer, 5-16"x⅜"x22¼" felt.
B 498		.10	Stud for rear axle cap, ⅝"x3⅛".
B 501		1.60	Fork, gear shifter.
B 502		.50	Rod for transmission shaft fork, ¾"x10 5-16".
B 503		1.30	Arm for gear shifter.
B 505		2.25	Rod, shifter, ¾"x29½".
B 507		.75	Handle for gear shifter.
B 510		.75	Pin for gear shift lock, ¾"x2⅝".
B 511		.05	Spring for gear shift lock pin, 11-16" O.D. x1⅛".
B 512		.50	Knob for gear shift lock, 1¾"x⅞".
B 514		.85	Nut for gear shift lock pin, 1¼"x1".
B 515		1.60	Bracket for gear shift latch.
B 517		1.65	Stud for reverse idler with B-519 washer.
B 519			Washer for reverse idler stud B-517, ⅛"x.877x2¼". Not sold separately from B-517.
B 520		.05	Washer for reverse idler, ⅛"x.753x1½".
B 523		1.90	Nut for ball race lock.

Part No.		Price	NAME OF PART
B 524	....	5.10	Nut for ball race retainer adjustment.
B 527	....	1.10	Spacer for ball race, 2⅛"x2".
B 528	....	1.75	Retainer, ball race, for lower transmission shaft.
B 529	....	2.70	Bearing, thrust, for lower transmission shaft, Bantam "Maiden," 1¾" shaft dia. x2 15-16" O.D.
B 538	....	.05	Lock, ball race retainer, 3⅜" D.
B 540	....	.85	Gasket for track oil reservoir cover, ⅛"x3" wide x8¾" long, felt.
B 581	....	.03	Key for pump and magneto shaft gear, ¼"x¼"x1 5-16".
B 582	....	1.60	Governor lever.
B 583	....	.15	Pin for governor ball, ⅜"x2⅛".
B 584	....	5.15	Gear for magneto shaft, 4½" O.D. x 1" bore, 1 5-16" face, 8 pitch, 34 teeth.
B 585	....	.15	Spring for governor, ⅞" dia. x3 5-16"x.102"; 22 coils.
B 586	....	.70	Governor ball.
B 587	....	1.60	Governor shaft, 1"x13 1-16".
B 588	....	2.20	Plug, sliding, for governor, 1¼"x3 5-16", with B-589 bushing.
B 589	....	.75	Bushing for governor plug B-588, ⅞" O.D. x⅝" I.D. x 1½" long.
B 590	....	.25	Rod used from governor lever to carburetor, ¼"x21⅛".
B 592	....	12.10	Cover for timing gear housing.
B 593	....	10.10	Housing for timing gear.
B 594	....	1.65	Bushing for timing gear end housing, 1" I.D. x1½" O.D. x2 15-16" long.
B 595	....	.50	Washer, dust (felt), for crank shaft, ½"x2⅛"x3 1-16".
B 596	....	.25	Pin, for governor shifter lever, ½"x3½".
B 597	....	.70	Rod for governor lever, ½"x10".
B 600	....	9.65	Gear for stationary drive, 4" O.D. x1.50" spline, 1.350" bore x1⅝" length through bore, 25 teeth.
B 601	....	14.30	Housing for stationary drive.
B 602	....	1.85	Plate, cover, for stationary drive gear.
B 603	....	.35	Cover for stationary drive bearing adjusting plate.
B 604	....	.10	Stud, long, for stationary drive housing, ⅝"x7⅝".
B 605	....	.10	Stud, short, for stationary drive housing, ⅝"x2¼".
B 606	....	.05	Gasket for stationary drive plate, 2½"x2¼"x.010.
B 608	....	11.70	Shaft for stationary drive, 3½" dia. x 11⅞".
B 609B	....	2.00	Ring for felt retainer washer.
B 610	....	4.90	Retainer for upper transmission shaft rear bearing.
B 613	....	.15	Spring, brake release, .135" Ga. x 1" O.D., 18 coils.
B 616	....	9.50	Pulley for stationary drive, 9"x7" face.
B 617B	....	.10	Washer for stationary drive shaft, 5-16"x1⅞"x2 9-16" felt.
B 618	....	.05	Washer for stationary drive gear, .25x25-32"x2".
B 619	....	7.61	Bearing for stationary drive shaft pulley, "Hyatt" No. 27174.
B 621	....	1.05	Ring, stop, for roller bearing.
B 650	....	.30	Wrench for rear axle nut.
B 653	....	....	Oiler or oil can. Write for price.

Part No.		Price	NAME OF PART
B 654			Holder for oil can. Write for price.
B 655		1.35	Wrench for bull pinion.
B 660			Wrench, monkey. Write for price.
B 661			Hammer, ball pein. Write for price.
B 662			Wrench, double end. 7-16″ and ½″ nuts. Write for price.
B 663			Wrench, double end. ⅜″ and 5-16″ nuts. Write for price.
B 664			Wrench, double end. ⅛″ and ¼″ nuts. Write for price.
B 665			Wrench, for spark plug. Write for price.
B 666			Chisel, cold, ⅜″. Write for price.
B 667			Puller for cotter pins. Write for price.
B 668			Screwdriver. Write for price.
B 669			Pliers, combination. Write for price.
B 670			Grease gun. Write for price.
B 671			Wrench, T-handle, for spark plugs, ⅜″ S.A.E. nut. Write for price.
B 700-1		4.50	Lever for steering clutch with B-731 steel part welded.
B 702		.01	Washer, for steering stud, ⅛″x49-64″x1⅞″.
B 703			End for brake lever B-733. Not sold separately from B-733.
B 712		5.10	Brake band with B-713 lining riveted. 3-16″x2½″x41¼″.
B 713			Brake lining for B-712. Write for price.
B 714		.85	Bolt, adjustment, for brake, ½″x5½″. Special forging.
B 717		.05	Spring for brake adjusting sleeve, 15-16″ I.D., 1″ long.
B 718		.65	Sleeve for brake adjusting bolt, 1¼″x2″.
B 719		1.10	Rocker for brake band.
B 720		4.75	Stud for steering clutch. (Forging.)
B 721		.05	Rod, reinforcing, for brake band, 5-16″x2 5-16″.
B 722		.95	Shaft, R.H., for brake, 1″x9 15-16″.
B 723		.95	Shaft, L.H., for brake, 1″x9 15-16″.
B 724		.05	Nut for brake adjusting bolt, 1¼″ hex. x 7-16″.
B 726		.05	Pin, reinforcing, for brake band, ⅜″x2 15-16″.
B 729		.01	Washer for brake shaft, 1-16″x1 1-16″x1¾″.
B 730		.50	Pedal for brake.
B 731			End of steering clutch lever. Welded to B-700. Not sold separately.
B 732		5.70	Lever for brake, R.H., with B-755 end welded.
B 733		5.05	Lever for brake, L.H., with B-703 end welded.
B 740		3.00	Plate, foot, ⅜″x9″x23½″.
B 741		1.10	Draw-bar, ½″x2½″x19½″.
B 742		1.00	Cross-bar for B-741 draw-bar; ⅜″x3″x17″.
B 743		1.00	Plate, guide, for draw-bar, ⅜″x2½″x20½″.
B 744		.15	Pipe, spacer, for draw-bar guide, ¾″x½″.
B 745		.35	Bolt for draw-bar guide, 1″x2½″ special.
B 746		.70	Guard for foot plate, 3″x3½″x5⅛″x5-16″.
B 748		3.30	Operator's seat.
B 749		2.35	Seat spring, 7-16″x3″x28½″.
B 751		2.60	Bracket for seat spring.
B 752		.05	Stud for seat spring, ⅝″x2⅛″.

Part No.		Price	NAME OF PART
B 755			End for lever B-732. Not sold separate from B-732.
B 757		.80	Cap for spring bracket.
B 758		7.95	Safety basket, ⅝"x73".
B 759		2.35	Spring for safety basket, 7-16"x3"x32¼".
B 760		16.60	Fuel tank complete.
B 761		.70	Flange, filler, for fuel tank.
B 762		.25	Flange, outlet, for fuel tank.
B 763			Cap, filler, for fuel tank, 1½" conn. Write for price.
B 764		3.20	Support, front, for fuel tank, ⅜"x2"x49⅜".
B 765		3.30	Support, rear, for fuel tank, ⅜"x2"x53 3-16".
B 766		1.80	Clamp, support, for fuel tank, 3-16"x1" band x 32 1-16" developed length.
B 768		1.20	Quadrant for throttle control.
B 769		1.00	Lever for throttle control.
B 770		.30	Trigger for throttle control lever.
B 771		.05	Arm for fuel tank filler cap, ⅛"x½"x6".
B 772		.30	Pin, quadrant, ⅝"x1¾".
B 773		.20	Plate, baffle, for fuel tank filler cap, .038x1 11-16" dia.
B 780		2.80	Tool box, 6½"x9"x22".
B 781		.60	Base for tool box, ⅞"x10"x22".
B 782		.60	Support, front, for tool box, ⅜"x2"x18¼".
B 783		.60	Support, rear, for tool box, ⅜"x2"x16½".
B 785			Valve, lever handle, shutoff, for fuel line, ⅛" connection. Write for price.
B 786			Union, ⅛" connection, for fuel line. Write for price.
B 787			Elbow, ⅛" connection, for fuel line. Write for price.
B 788			Tee for fuel line and radiator, ⅛" connection. Write for price.
B 789		1.40	Strainer, horizontal, for fuel line.
B 790			Union for fuel line and radiator, ⅛" conn. Write for price.
B 791			Union elbow for fuel line pipe end, ⅛" conn. Write for price.
B 792			Nipple, for fuel line, ⅛"x6". Write for price.
B 793			Nipple, for fuel line, ⅛"x2". Write for price.
B 794			Nipple, for fuel line and radiator, ⅛"x¾". Write for price.
B 795			Nipple, for fuel line supply pipe, ⅛"x6¾". Write for price.
B 796		1.95	Pipe with fittings for carburetor.
B 800		1.15	Track shoe.
B 801		.12	Track bolt with nut, 7-16"x2" S.A.E.
B 802		.11¾	Track bolt with nut, 7-16"x1⅜" S.A.E.
B 803		1.50	Link, track, R.H., forging.
B 804		1.50	Link, track, L.H., forging.
B 804M		5.15	Links, track, with spool and shoe combined, manganese steel.
B 805		.85	Spool, track.

Part No.		Price	NAME OF PART
B 806		.40	Pin, track, 1¼"x6".
B 806M		.75	Pin, track, manganese steel.
B 807		.01	Cotter for track pin, ¼"x1 15-16".
B 808		60.15	Sprocket, track.
B 810		.25	Cover, hand hole, for sprocket, 5½" dia.
B 811		.35	Gasket, for hand hole cover on sprocket, ¼"x4"x5½" felt.
B 815		.60	Washer, bearing retainer, .175x2.760"x4.751".
B 816		8.55	Bearing for track sprocket, "Hyatt" No. 16373.
B 820		1.80	Spacer for track sprocket bearing.
B 821		4.30	Bearing for swing frame, R.H. inside and L.H. outside.
B 822		4.30	Bearing for swing frame, L.H. inside and R.H. outside.
B 823		.30	Washer, rear, for track frame bracket, 5-16"x5½"x6 3-16" felt.
B 824		1.10	Spacer for rear axle bearing.
B 825B		9.00	Cover, L.H., for sprocket gear.
B 826B		9.00	Cover, R.H., for sprocket gear.
B 827		.10	Bolt for sprocket frame bracket, ½"x2" S.A.E.
B 829		30.65	Axle, rear, 2¼"x51 1-16".
B 830		1.00	Nut for rear axle.
B 831		.15	Spring for sprocket dust guard, 1 3-16" O.D. x 2¾".
B 840		19.95	Idler, front, with 2 B-842 bushings.
B 842		1.75	Bushing for front idler B-840. (2 required.)
B 843		4.25	Shaft for front idler, 1½"x12⅝".
B 845		3.00	Bracket, R.H., for front idler frame.
B 846		3.00	Bracket, L.H., for front idler frame.
B 848		.09	Bolt for front idler frame bracket, ⅝"x6¾" S A.E.
B 852		1.45	Plate for front idler clamp.
B 854		1.50	Bracket, adjusting, for front idler.
B 856		.42	Bolt, adjusting, for front idler, with nut, ¾"x8", 6¾ thd. Special.
B 862		4.05	Plate, side, for radiator.
B 863		11.90	Dome top, for radiator.
B 864		5.60	Shroud or hood for radiator fan.
B 885		9.20	Manifold, exhaust.
B 886		.95	Pipe, hot air leader, with asbestos jacket, 1¾"x11".
B 887		2.25	Elbow for clarifier.
B 888		.05	Washer, clarifier elbow, ¼"x1¾" I.D. x 4" O.D.
B 889		1.50	Elbow, hot air.
B 890		4.90	Manifold, inlet.
B 900		9.00	Roller, double flanged, track, without bearings.
B 907		3.25	Box, R.H., for center of swing frame.
B 908		3.25	Box, L.H., for center of swing frame.
B 909		2.95	Brace, R.H., for center of swing frame, 2½"x2½"x52½"x 3-16".
B 910		2.95	Brace, L.H., for center of swing frame, 2½"x2½"x52½"x 3-16".
B 911		.05	Bolt, for track frame angle brace, ½"x1" S.A.E.
B 912		.10	Bolt, for track brace bracket, ½"x1¼" S.A.E.

Part No.		Price	NAME OF PART
B 915		3.30	Bracket for upper track roller.
B 917		.10	Bolt, bracket, ½"x1¾" S.A.E.
B 919		.05	Washer, angle track roller.
B 920		Std. List	Nut, check or jam, for track roller and spark arrester, ½".
B 921		" "	Plug, pipe, ¼", for track roller shaft.
B 922		" "	Plug, pipe, ½", for front idler.
B 924		3.00	Shaft, for upper track roller, 1¼"x8⅜".
B 928		4.80	Roller, upper, track.
B 930		.70	Washer, truck roller, 3-16"x1 15-16"x3¾".
B 931		.70	Washer, truck roller, 3-16"x1 15-32"x3¾".
B 934		8.30	Roller, lower, track without bearing.
B 935		2.25	Bracket for lower track roller.
B 937		.30	Spacer for track roller bearing, ⅛"x1⅞"x2.730".
B 939		.02	Pin for track roller washer, ¼"x½".
B 941		3.70	Shaft for lower track roller, 1½"x12 9-16".
B 943		3.42	Bearing for track rollers B-900 and B-934—"Hyatt" No. 18250.
B 950		10.70	Roller, lower, track with 2 B-842 plain bearings.
B 951		.10	Washer for lower track roller B-950, 1-16"x1 9-16"x2¾".
B 957		.51	Washer for lower track roller shaft, ⅜"x2⅞"x3¾" felt.
B 958		.15	Bolt for lower track roller frame bracket, ½"x4" S.A.E.
B 960		.05	Washer, angle.
B 962		.05	Washer, angle.
B 966		1.70	Bracket for main frame spring.
B 970		2.40	Shackle for center main spring.
B 971		.55	Plate for center main spring shackle.
B 975		6.10	Bracket, support, for track frame.
B 977		3.00	Spring shackle.
B 978		.50	Bolt for track frame spring shackle, upper, 1 1-16"x6". Special.
B 979		.45	Bolt for track frame spring shackle, lower, 1 1-16"x4 5-16" . Special.
B 983			Grease cup, ⅛". Write for price.
B 985		12.00	Front spring with bushings.
B 990		2.65	Guard, track. Size: .042x12"x27" with 3 B-991.
B 993		33.56	Swing frame, complete, R.H.
B 994		33.56	Swing frame, complete, L.H.
B 996		41.40	Main frame, complete.
B 997		.85	Stud for clutch pressure plate, ⅝"x4½".
B 998		3.50	Plate (male), clutch pressure.
B 999		4.00	Plate (female), clutch pressure.

Part No.		Price	NAME OF PART
			ADDITIONS
B 274			Ring for B-275 piston.
B 275			Piston, for ~~5.655"~~ 4 5/8" cylinder.
B 60		.85	Block, track shoe filler.
B 946		1.90	Shaft for water pump—.997" dia.x14 7-16".
B 947		1.70	Coupling for Bosch magneto.
B 990		1.35	Guard, track—without B-991 brackets.
B 534		2.65	Guard or apron for sprocket, R.H.
B 535		2.65	Guard or apron for sprocket, L.H.
		5.90	Spark arrester assembly.
		44.75	Cam shaft assembly.
		113.00	Radiator assembly.
		6.70	Track oiler assembly (pipe fittings). Price per set.
		165.75	Track—MANGANESE—complete.
		165.75	Track—DROP FORGED—complete.
		119.55	Track—DROP FORGED—less shoes.
		50.95	Main clutch assembly.
		832.00	MOTOR complete.
B 526		.50	Sleeve, ball race, 1¾"x15-16".

GIVE MOTOR AND TRACTOR NUMBER IN ORDERING PARTS.

Part No.		Price	NAME OF PART

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